

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
<del>Section No. 4</del>	<del>Right of Way Plat</del>
<del>Section No. 5</del>	<del>Plan and Profile</del>
Section No. 6	Standard Detail Drawings
<del>Section No. 7</del>	<del>Sign Plates</del>
<del>Section No. 8</del>	<del>Structure Plans</del>
<del>Section No. 9</del>	<del>Computer Earthwork Data</del>
<del>Section No. 0</del>	<del>Cross Sections</del>

TOTAL SHEETS = 36



45

DESIGN DESIGNATION

A.A.D.T. 2023	=	35
A.A.D.T. 2043	=	690
D.H.V.	=	
D.D.	=	
T.	=	
DESIGN SPEED	=	45 MPH
ESALS	=	7,300

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

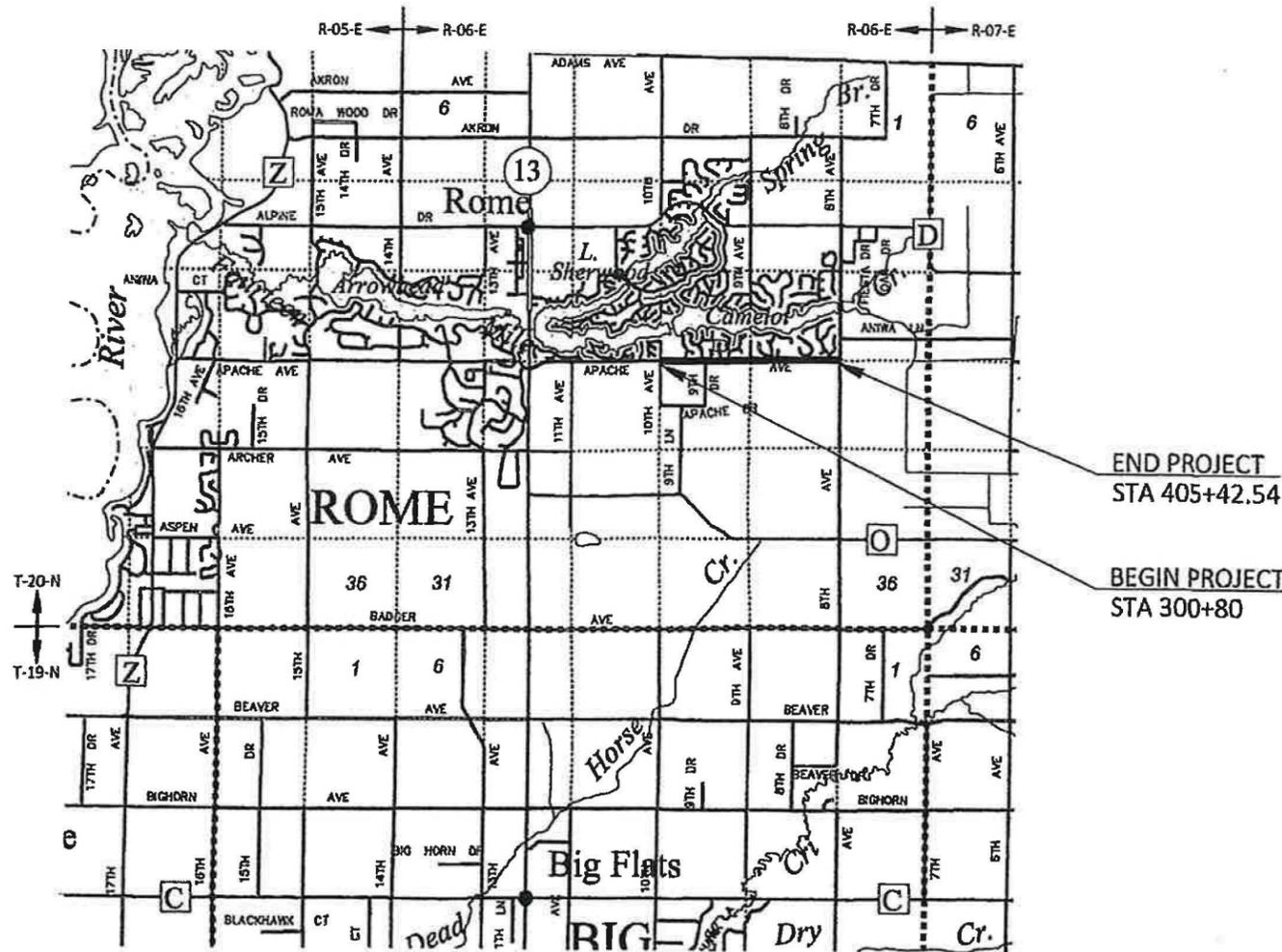
## PLAN OF PROPOSED IMPROVEMENT

### T ROME, APACHE AVENUE

10TH AVENUE TO 8TH AVENUE

LOCAL STREET  
ADAMS COUNTY

STATE PROJECT NUMBER
6395-00-70



LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 2 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ADAMS NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12B

STATE PROJECT		FEDERAL PROJECT	
6395-00-70		PROJECT	CONTRACT
		WISC 2023048	1

PROJECT ID: 6395-00-70

COUNTY: ADAMS

ACCEPTED FOR  
TOWN OF ROME

Date: 8/29/22  
*Brad Martin*  
Director of Public Works

ORIGINAL PLANS PREPARED BY  
**GEC**  
General Engineering Company

**BRADLEY R. BOETTCHER**  
E-34916  
PORTAGE, WI  
PROFESSIONAL ENGINEER

DATE: 08/28/22  
*B. Boettcher*  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY  
Surveyor: GENERAL ENGINEERING COMPANY  
Designer: GENERAL ENGINEERING COMPANY  
Project Manager: BRADLEY BOETTCHER  
Regional Examiner: JASON SCHAEFFER  
Regional Supervisor: DAN ERVA

APPROVED FOR THE DEPARTMENT  
DATE: 9/15/2022  
*[Signature]*  
(Signature)

GENERAL NOTES

1. CONTRACT DOCUMENTS SHALL BE ISSUED TO ALL SUBCONTRACTORS BY THE GENERAL CONTRACTOR IN COMPLETE SETS IN ORDER TO ACHIEVE THE FULL EXTENT AND COMPLETE COORDINATION OF ALL WORK.
2. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
3. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
4. DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED THROUGHOUT THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO DETAILS SHOWN, WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, NOTIFY ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED AND CONDITIONED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. INCASE OF DISCREPANCIES BETWEEN MANUFACTURERS' INSTRUCTIONS AND THE CONTRACT DOCUMENTS, NOTIFY ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. THE CONTRACTOR IS TO CONTACT "DIGGERS HOTLINE" FOR UTILITY LOCATIONS, MINIMUM 3 BUSINESS DAYS PRIOR TO ANY EXCAVATION / CONSTRUCTION (811 OR 1-800-242-8511).
8. ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.
9. TYPICAL SECTIONS SHOW THE GENERAL FEATURES THROUGHOUT THE PROJECT. PAVEMENT SLOPES, FORESLOPES, ETC., MAY VARY WITHIN THE LIMITS OF THE SECTION.
10. WHEN PORTIONS OF EXISTING ASPHALT SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. THE LOCATION OF SAW JOINTS AND THE AMOUNT REMOVED WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
11. CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS.
12. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

ORDER OF SECTION 2 SHEETS

- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- TRAFFIC CONTROL PLAN
- CONSTRUCTION STAGING
- ALIGNMENT

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AP	ACCESS POINT
AR	ACCESS RIGHTS
AC	ACRE
AGG	AGGREGATE
Z	ANGLE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALTIC
APM	ASPHALTIC PLANT MIX
AVG	AVERAGE
BK	BACK
BF	BACK FACE
BM	BENCH MARK
CB	CATCH BASIN
CL OR C/L	CENTER LINE
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CB#	CONTROL BASE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CABC	CRUSHED AGGREGATE BASE COURSE
CY	CUBIC YARD
CULV	CULVERT
DIA	DIAMETER
DWY	DRIVEWAY
EB	EASTBOUND
ELEC	ELECTRIC (AL)
EL	ELEVATION
EW	ENDWALL
EXIST	EXISTING
FE	FIELD ENTRANCE
HYD	HYDRANT
INL	INLET
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE OR PIN
LF	LINEAR FOOT
MH	MANHOLE
MP	MARKER POST
ML	MATCH LINE
NOM	NOMINAL
NB	NORTHBOUND
NO	NUMBER
OL	OUT LOT
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PT	POINT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
LB	POUND
PSI	POUNDS PER SQUARE INCH
PE	PRIVATE ENTRANCE
PL	PROPERTY LINE
R	RADIUS
R/W	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
SAN S	SANITARY SEWER
SHLDR	SHOULDER
SW	SIDEWALK
SB	SOUTHBOUND
SQ	SQUARE
STD	STANDARD
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
TEL	TELEPHONE
TEMP	TEMPORARY
TC	TOP OF CURB
TYP	TYPICAL
UG	UNDERGROUND
WM	WM WATER MAIN
WV	WATER VALVE

ENGINEER

GENERAL ENGINEERING COMPANY  
 BRADLEY BOETTCHER  
 916 SILVER LAKE DRIVE  
 PORTAGE, WI 53901  
 PHONE: 608-742-2169  
 EMAIL: BBOETTCHER@GENERALENGINEERING.NET

TOWN CONTACT

TOWN OF ROME PUBLIC WORKS  
 ATTN: BRAD MARTINSON  
 1156 ALPINE DRIVE  
 NEKOSSA, WI 54457  
 PHONE: 715-325-8017  
 EMAIL: MARTINSON@ROMEWI.COM

GAS

WE ENERGIES  
 ATTN: TRAVIS KAHL  
 1921 8TH STREET  
 WISCONSIN RAPIDS, WI 54494  
 PHONE: 715-421-7256  
 EMAIL: TRAVIS.KAHL@WE-ENERGIES.COM

COMMUNICATION

SOLARUS INTERNET  
 440 EAST GRAND AVENUE  
 WISCONSIN RAPIDS, WI 54494-8045  
 PHONE: 715-421-8111  
 EMAIL: PIERCE@SOLARUS.NET

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
 BRADLEY BETTHAUSER  
 910 HWY 54E  
 BLACK RIVER FALLS, WI 54615  
 PHONE: 715-213-9064  
 EMAIL: BRADLEYBETTHAUSER@WISCONSIN.GOV

OWNER

TOWN OF ROME  
 1156 ALPINE DRIVE  
 NEKOSSA, WI 54457  
 PHONE: 715-325-8022  
 EMAIL: REUTEMAN@ROMEWI.COM

ELECTRIC

ADAMS-COLUMBIA ELECTRIC COOP  
 OVERHEAD ELECTRIC  
 ATTN: MARK LAMORE  
 401 E LAKE STREET  
 FRIENDSHIP, WI 53934  
 PHONE: 800-831-8629  
 EMAIL: MLAMORE@ACECWI.COM

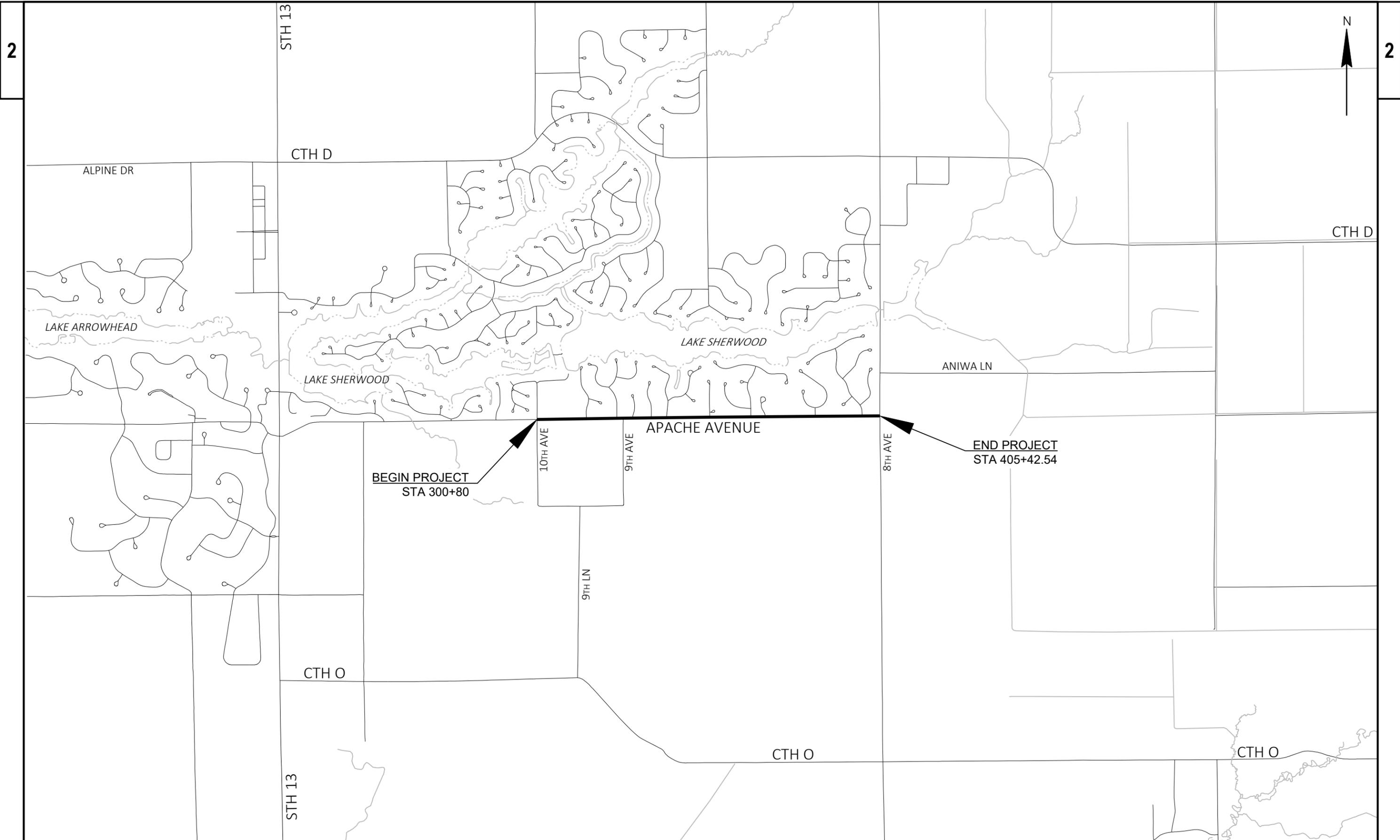
WATER

ROME WATER UTILITY  
 ATTN: CHAD ZIEGLER  
 299 LEISURE LANE  
 NEKOSSA, WI 54457  
 PHONE: 715-325-2600  
 EMAIL: RWSUP0926@GMAIL.COM

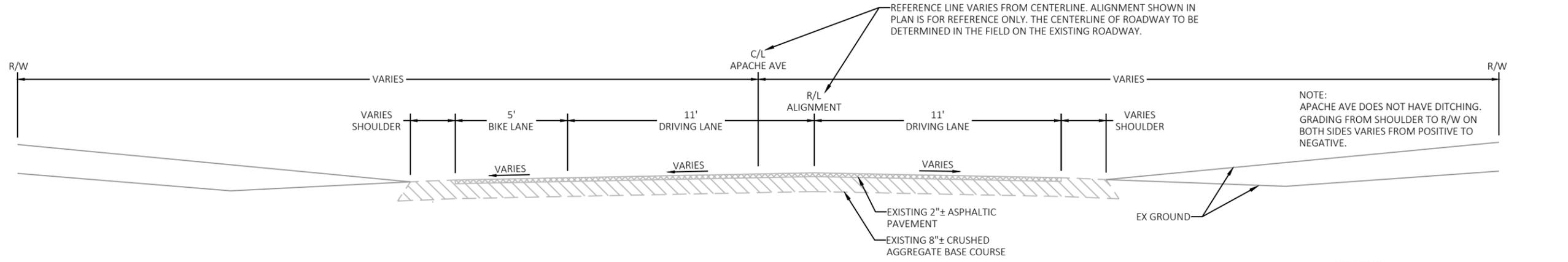


DIAL **811** or 1-800-242-8511

www.DiggersHotline.com



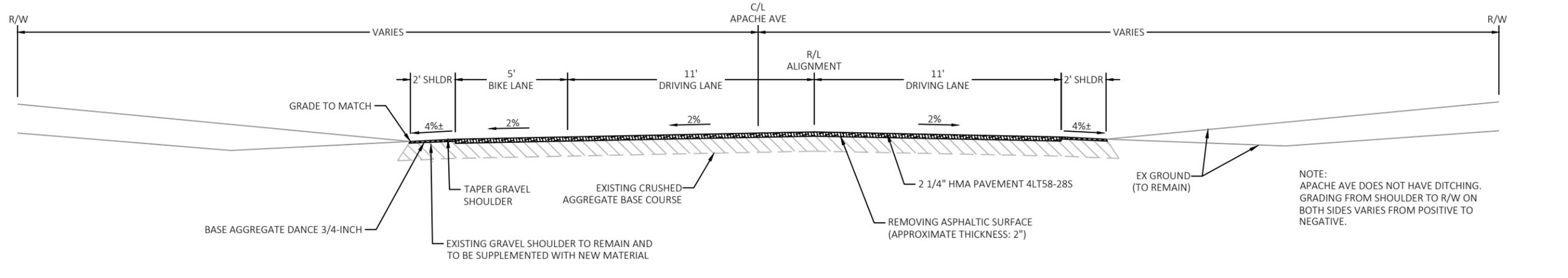
PROJECT NO: 6395-00-70	HWY: APACHE AVENUE	COUNTY: ADAMS	PROJECT OVERVIEW	SHEET	<b>E</b>
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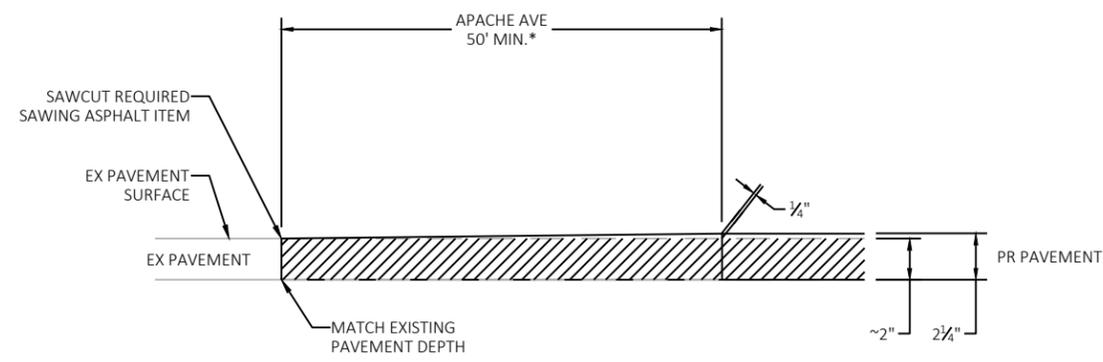
**TYPICAL EXISTING SECTION**  
**STA 300+80.00 TO 405+42.54**

**LEGEND**

	EXISTING HMA PAVEMENT
	EXISTING BASE COURSE
	PROPOSED PAVEMENT
	PROPOSED BASE AGGREGATE DANCE 3/4-INCH



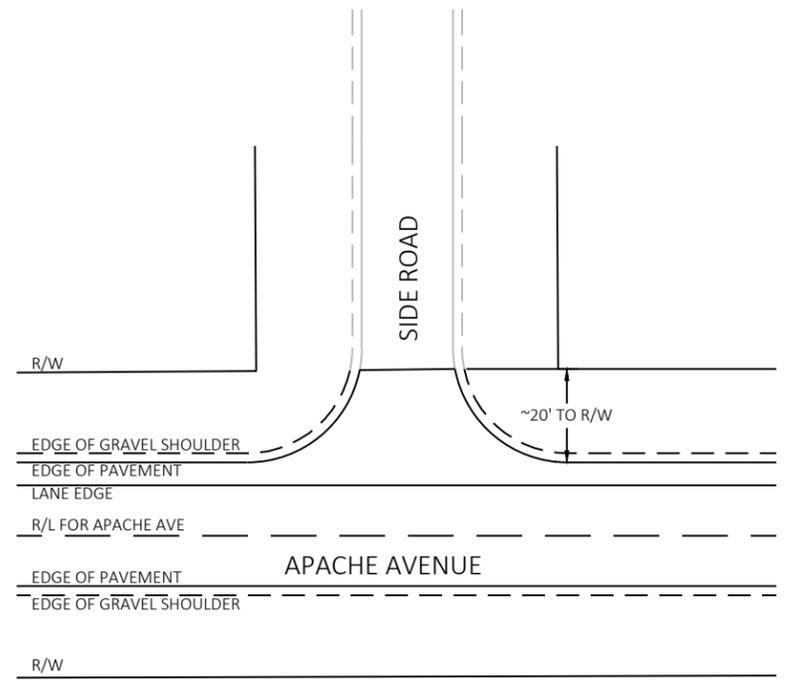
**TYPICAL FINISHED SECTION**  
**STA 300+80.00 TO 405+42.54**



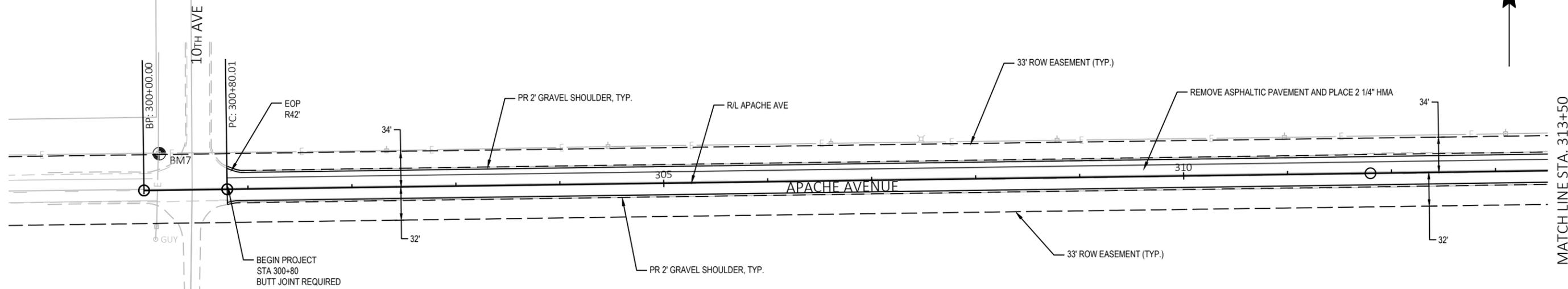
 REMOVE ASPHALTIC SURFACE PAVEMENT

NOTE:  
 "\*" DENOTES EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD

**MAINLINE PAVEMENT JOINT DETAIL**



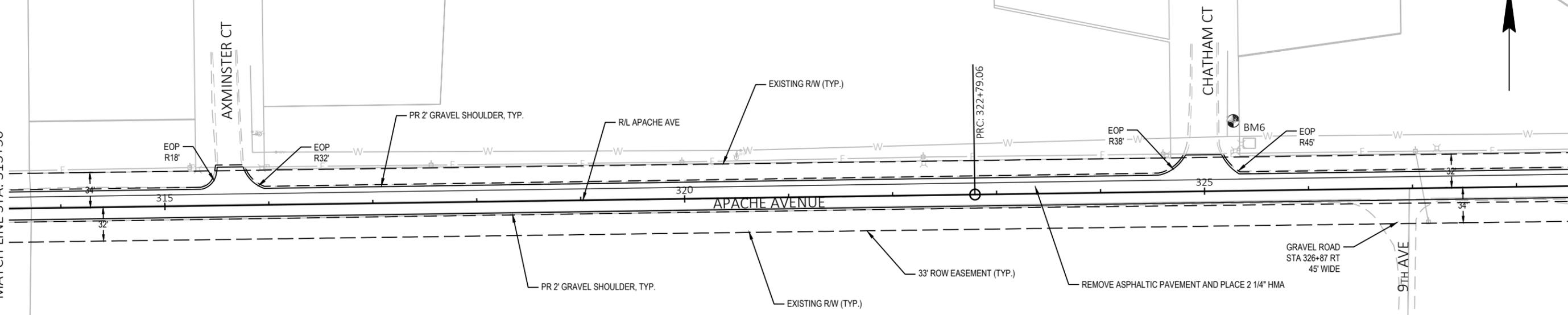
**TYPICAL SIDE ROAD PAVING DETAIL**



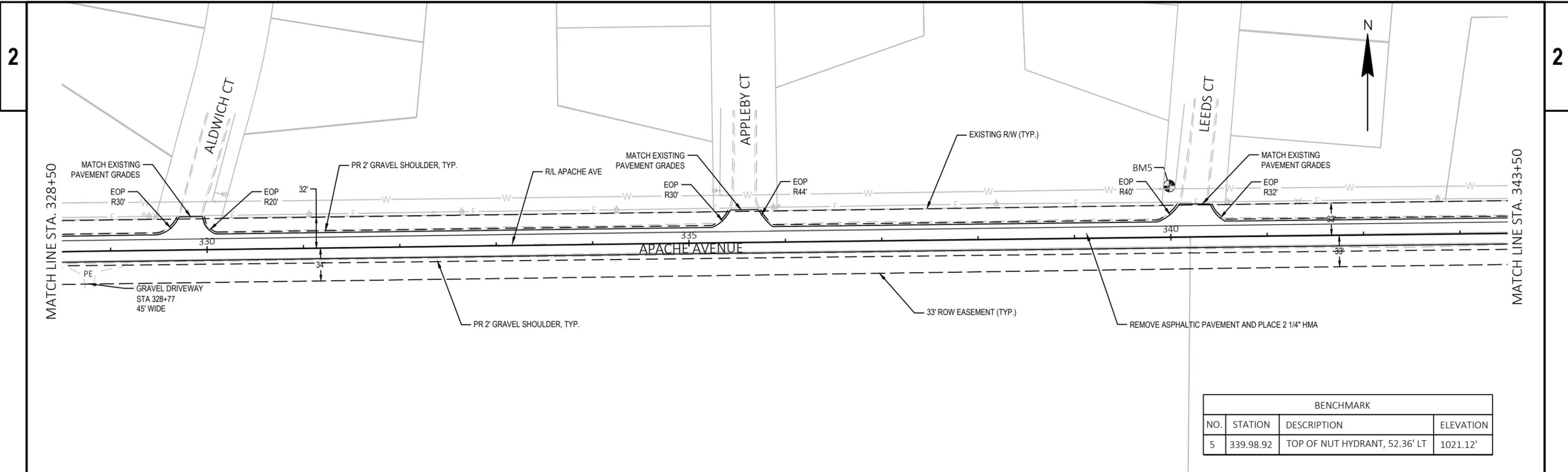
BENCHMARK			
NO.	STATION	DESCRIPTION	ELEVATION
7	300+15.11	NAIL IN THE POLE, 35' LT	1016.40'

MATCH LINE STA. 313+50

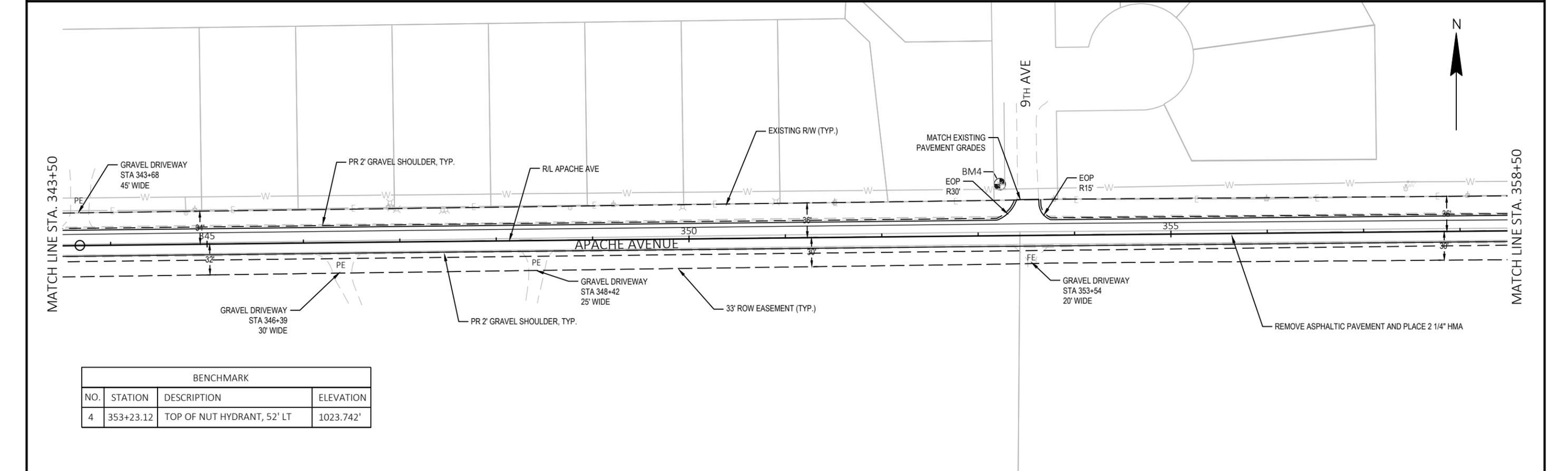
MATCH LINE STA. 328+50



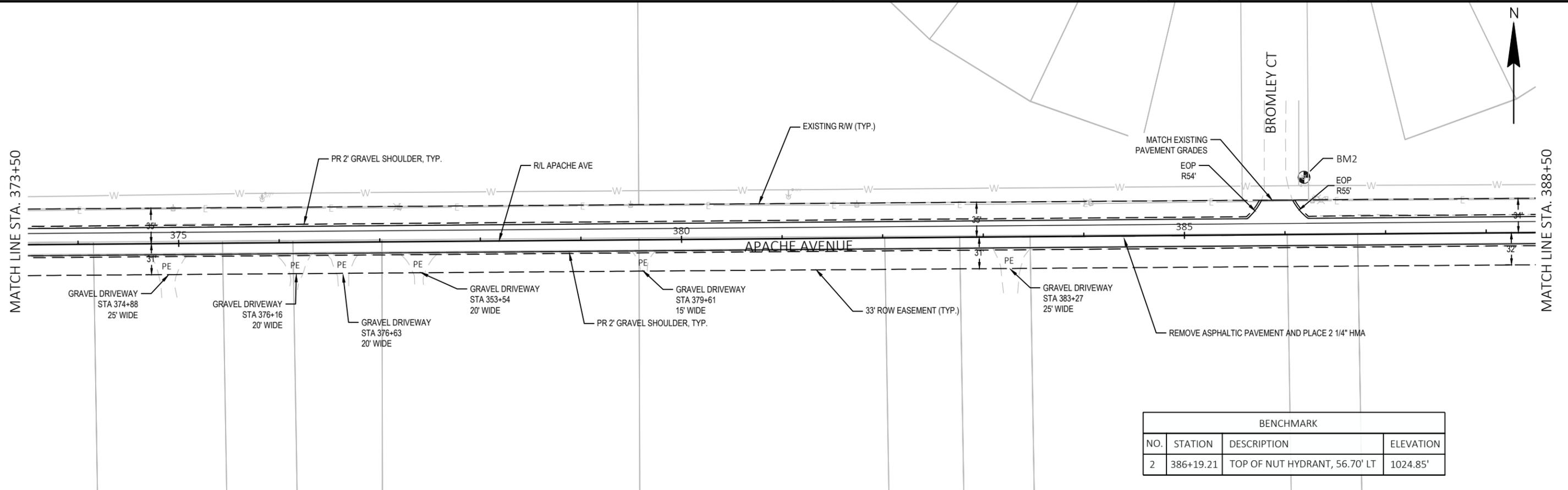
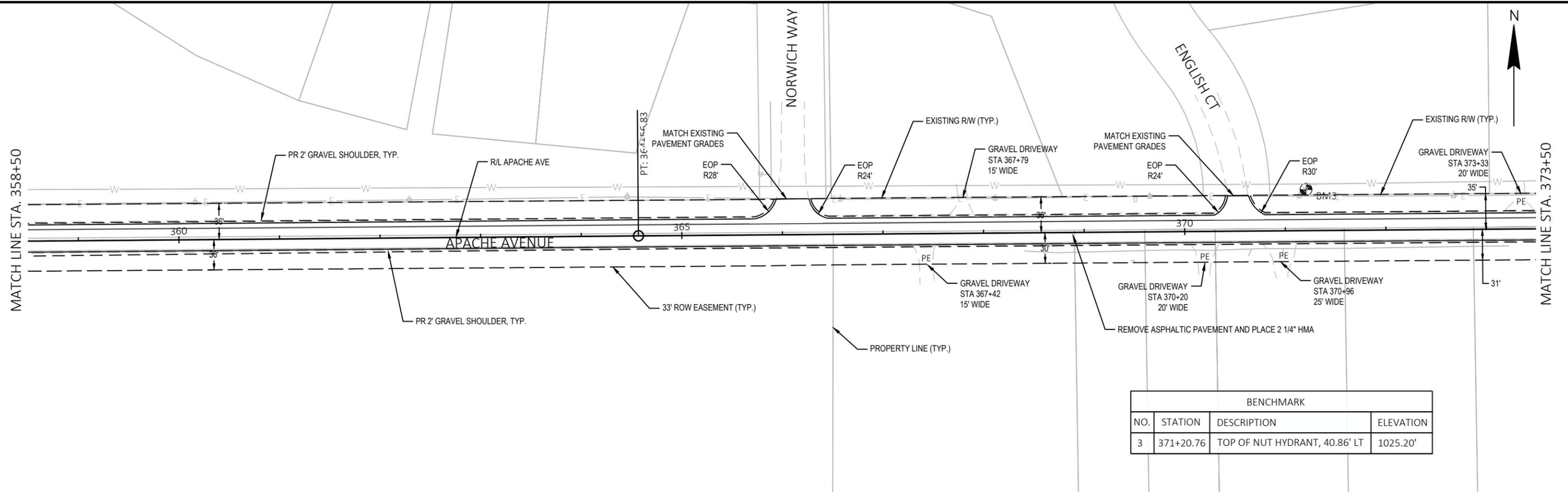
BENCHMARK			
NO.	STATION	DESCRIPTION	ELEVATION
6	325+28.53	TOP OF THE NUT HYDRANT, 66' LT	1021.58'

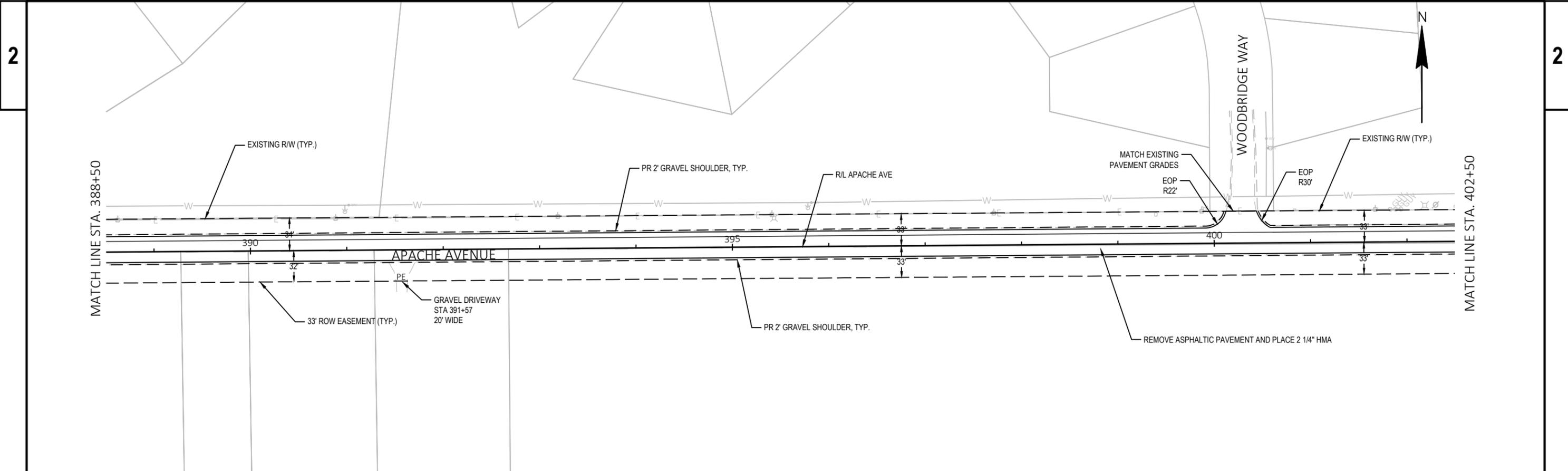


BENCHMARK			
NO.	STATION	DESCRIPTION	ELEVATION
5	339.98.92	TOP OF NUT HYDRANT, 52.36' LT	1021.12'

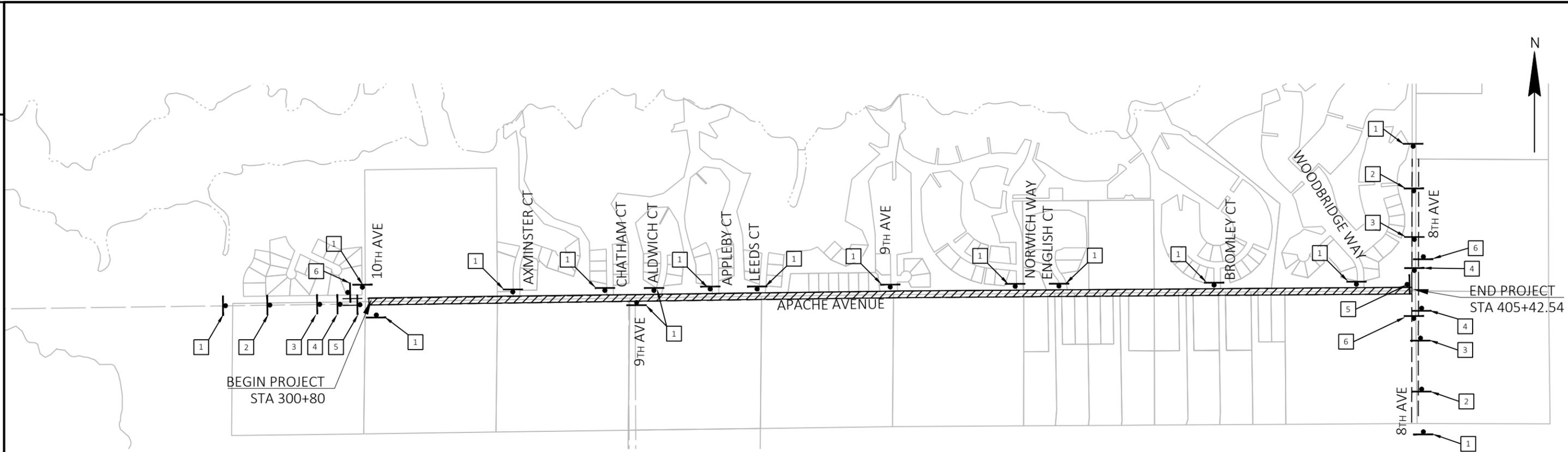


BENCHMARK			
NO.	STATION	DESCRIPTION	ELEVATION
4	353+23.12	TOP OF NUT HYDRANT, 52' LT	1023.742'

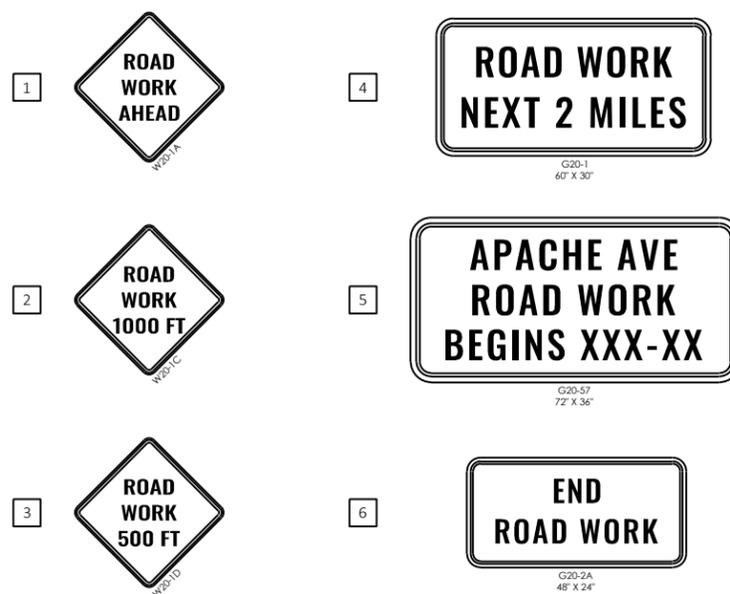




BENCHMARK			
NO.	STATION	DESCRIPTION	ELEVATION
1	405+33.81	TOP OF NUT HYDRANT, 51.54' LT	1026.09'



SIGN LEGEND

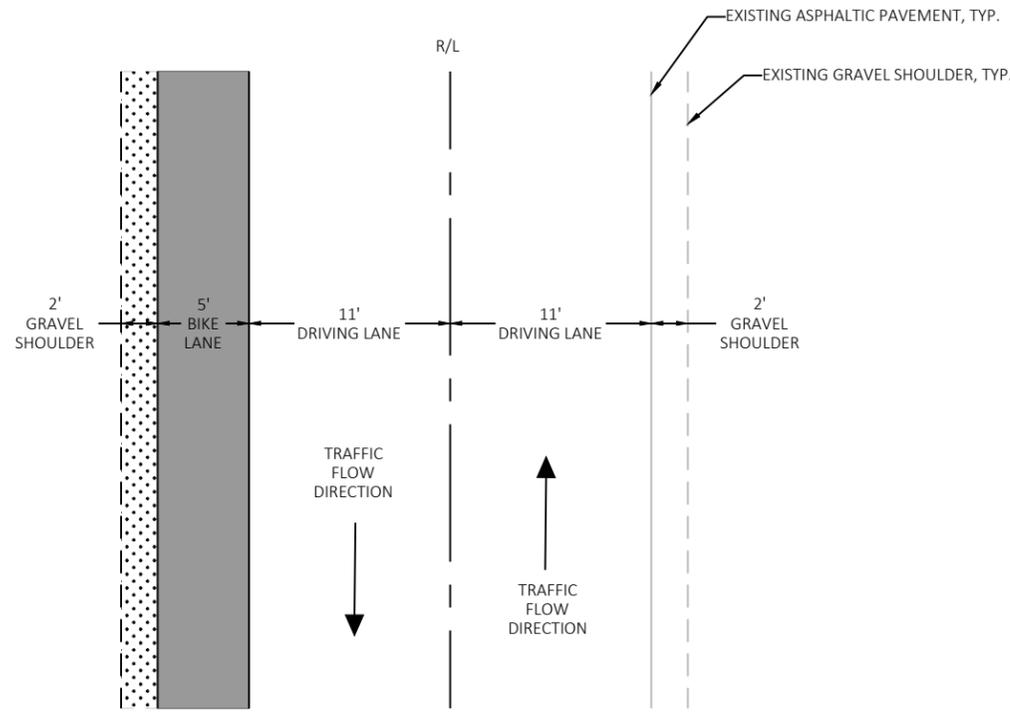


PLAN LEGEND



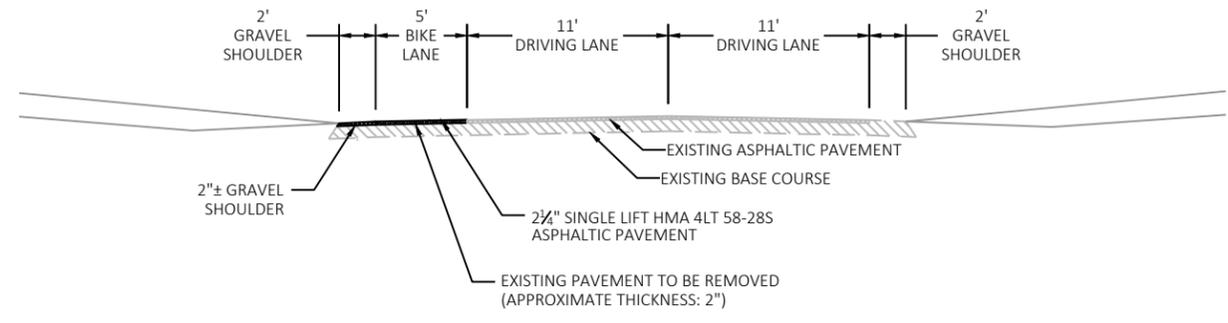
GENERAL NOTES

1. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON FIELD CONDITIONS AND THE CONTRACTOR'S METHODS OF OPERATION.
2. SIGN PLACEMENT ON MAP IS NOT TO SCALE.
3. ALL TRAFFIC CONTROL SIGNS ARE 48"x48" UNLESS OTHERWISE STATED.
4. PLACE SIGN G20-57 SEVEN DAYS PRIOR TO CONSTRUCTION, REMOVE AT THE START OF CONSTRUCTION.
5. THE TRAFFIC CONTROL FOR THIS PROJECT WILL BE COMPLETED WITH FLAGGING OPERATION.



PLAN VIEW

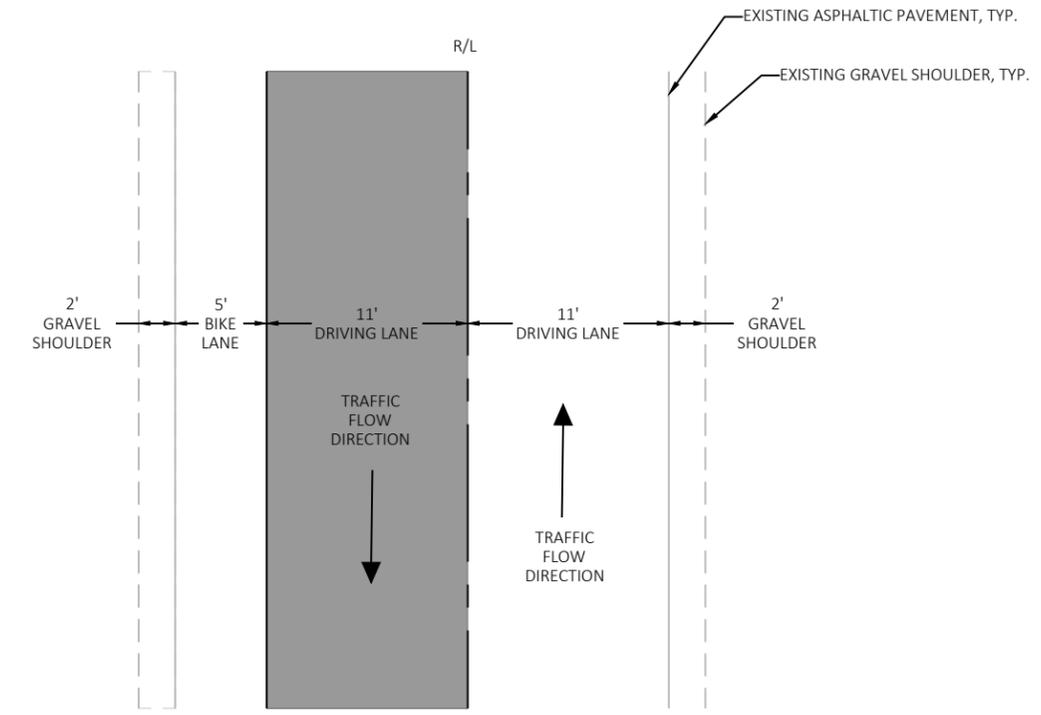
- FIRST PASS: EXISTING GRAVEL SHOULDER TO REMAIN
- FIRST PASS: REMOVED & RELAID ASPHALT



FIRST PASS DETAIL

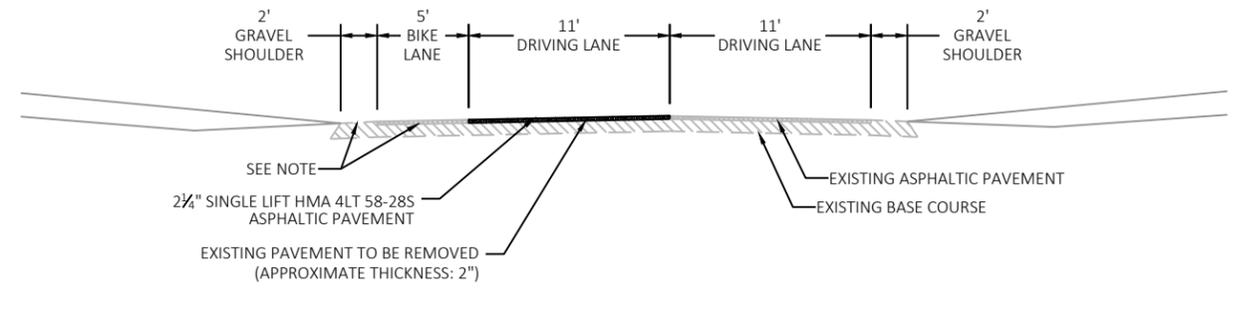


NOTE:  
DETAIL SHOWS BIKE LANE AND SHOULDER DONE  
FIRST.



PLAN VIEW

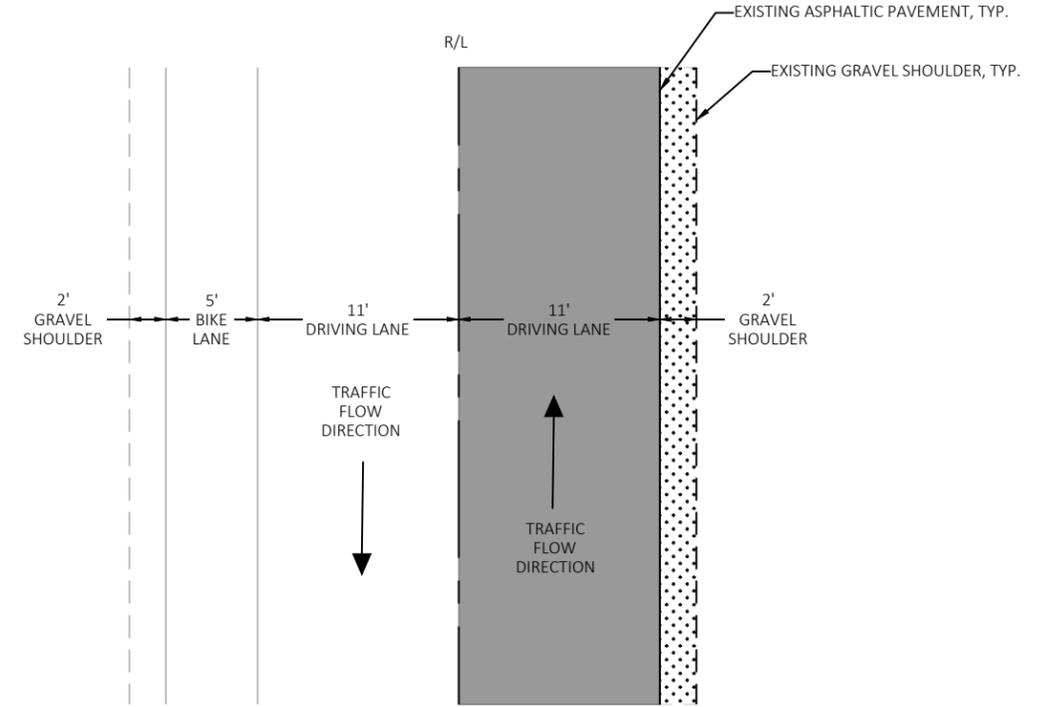
- SECOND PASS: REMOVED & RELAID ASPHALT



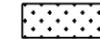
SECOND PASS DETAIL



NOTE:  
DETAIL SHOWS BIKE LANE AND WESTBOUND LANE  
COMPLETED FIRST. MIRROR OPERATIONS FOR  
WESTBOUND LANE.



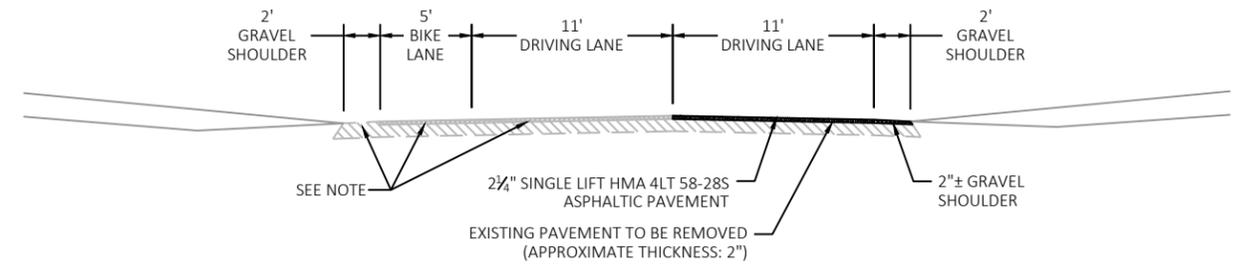
PLAN VIEW



THIRD PASS: EXISTING GRAVEL SHOULDER TO REMAIN



THIRD PASS: REMOVED & RELAID ASPHALT



THIRD PASS DETAIL



CURVE 1	CURVE 2
PI STA: 311+79.53	PI STA: 343+67.95
Y: 303529.49	Y: 303576.90
X: 542356.40	X: 545544.47
DELTA: 0°03'59"	DELTA: 0°23'38"
L: 2199.05'	L: 4177.78'
CHORD: N89°10'52"E, 2199.05'	CHORD: N89°20'41"E, 4177.78'
R: 1897900.00'	R: 607830.00'
PC STA: 300+80.01	PC STA: 322+79.06
Y: 303514.41	Y: 303545.84
X: 541256.98	X: 543455.80
PT STA: 322+79.06	PT STA: 364+56.83
Y: 303545.84	Y: 303593.61
X: 543455.80	X: 547633.30
BK: N89°12'51.6"E	BK: N89°08'52.6"E
AH: N89°08'52.6"E	AH: N89°32'30.3"E

PROJECT NO: 6395-00-70

HWY: APACHE AVENUE

COUNTY: ADAMS

ALIGNMENT

SHEET

E

Estimate Of Quantities

6395-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	32,210.000	32,210.000
0004	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 6395-00-70	EACH	1.000	1.000
0006	213.0100	Finishing Roadway (project) 01. 6395-00-70	EACH	1.000	1.000
0008	305.0110	Base Aggregate Dense 3/4-Inch	TON	270.000	270.000
0010	460.2000	Incentive Density HMA Pavement	DOL	4,520.000	4,520.000
0012	460.5224	HMA Pavement 4 LT 58-28 S	TON	4,590.000	4,590.000
0014	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6395-00-70	EACH	1.000	1.000
0016	619.1000	Mobilization	EACH	1.000	1.000
0018	624.0100	Water	MGAL	30.000	30.000
0020	642.5001	Field Office Type B	EACH	1.000	1.000
0022	643.0900	Traffic Control Signs	DAY	260.000	260.000
0024	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0026	643.5000	Traffic Control	EACH	1.000	1.000
0028	646.1020	Marking Line Epoxy 4-Inch	LF	31,265.000	31,265.000
0030	646.6120	Marking Stop Line Epoxy 18-Inch	LF	150.000	150.000
0032	650.8000	Construction Staking Resurfacing Reference	LF	10,470.000	10,470.000
0034	650.9911	Construction Staking Supplemental Control (project) 01. 6395-00-70	EACH	1.000	1.000
0036	690.0150	Sawing Asphalt	LF	354.000	354.000
0038	740.0440	Incentive IRI Ride	DOL	8,740.000	8,740.000
0040	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0042	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER (1) MGAL	REMARKS
300+80	-	405+42.54	PROJECT 6395-00-70 SIDEROADS DRIVEWAYS	160 20 90	7 3	10 PAVED SIDEROADS 12 GRAVEL DRIVEWAYS
TOTAL 0010				270	10	

(1) ADDITIONAL QUANTITIES LISTED ELSEWHERE.

STATION	TO	STATION	LOCATION	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	REMARKS
300+80	-	405+42.54	MAINLINE SIDEROADS PROJECT 6395-00-70	4,340 250	PAVEMENT
TOTAL 0010				4,590	

STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING 6395- 00-70 EACH	624.0100 WATER (1) MGAL	690.0150 SAWING ASPHALT LF	REMARKS
300+80	-	405+42.54	MAINLINE BEGIN PROJECT	32,210		20	74	
300+80	-	405+42.54	END PROJECT SIDE ROADS PROJECT 6395-00-70		1		280	
TOTAL 0010				32,210	1	20	354	

(1) ADDITIONAL QUANTITIES LISTED ELSEWHERE.

3

3

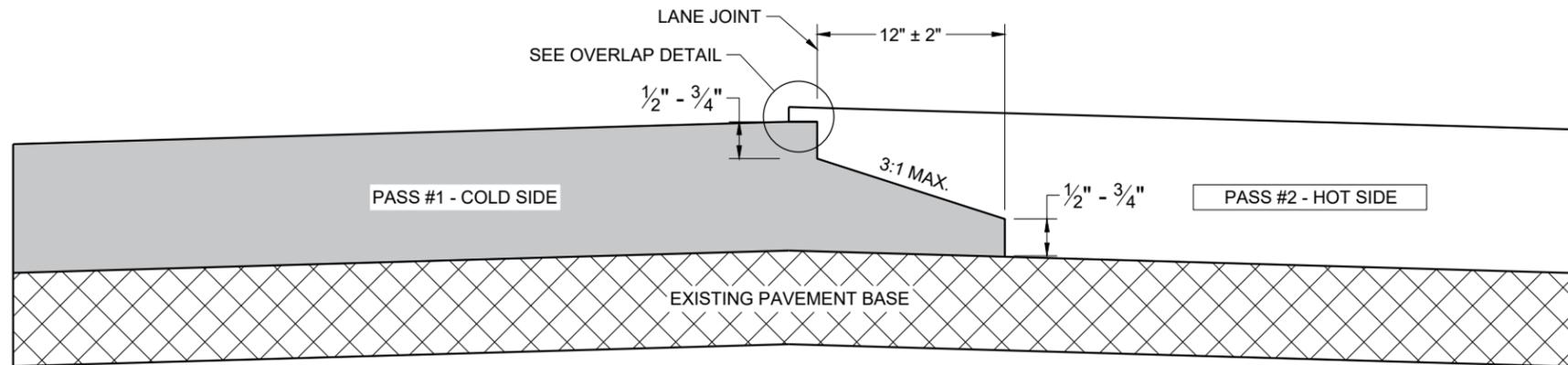
LOCATION	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.5000 TRAFFIC CONTROL EACH	REMARKS
PRIOR TO CONSTRUCTION PROJECT 6395-00-70	260	36	1	G20-57 SIGNS TO BE PLACED AT PROJECT TERMINI 7 DAYS PRIOR TO THE CONSTRUCTION AND REMOVED WHEN CONSTRUCTION STARTS
TOTAL 0010	260	36	1	

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.6120 MARKING STOP LINE EPOXY 18- INCH LF	REMARKS
300+80	-	399+92	CL	9,915		YELLOW PASSING LINE
399+92	-	405+42.5	CL	550		YELLOW PASSING LINE WESTBOUND
399+92	-	405+42.5	CL	550		YELLOW NO-PASSING LINE EASTBOUND
300+80	-	405+42.5	LT	9,870		WHITE EDGE LINE/ BIKE LANE DIVIDER, 11FT LEFT OF CENTER
300+80	-	405+42.5	RT	10,380		WHITE EDGE LINE, 11FT RIGHT OF CENTER
			SIDEROADS		150	WHITE STOP LINE
			TOTAL 0010	31,265	150	

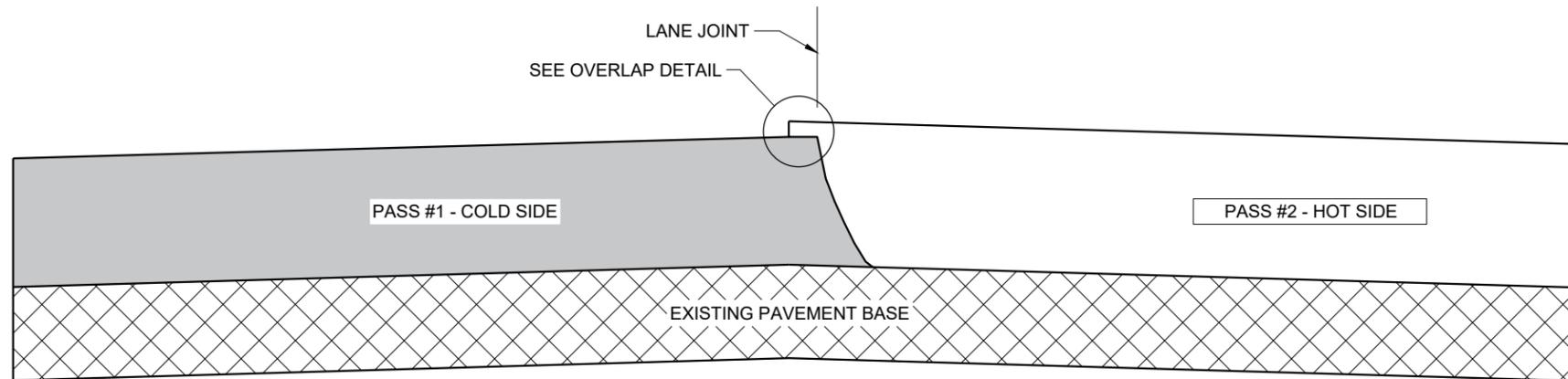
STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 6395-00-70 EACH	REMARKS
300+80	-	405+42.54	MAINLINE	10,470	1	
			TOTAL 0010	10,470	1	

## Standard Detail Drawing List

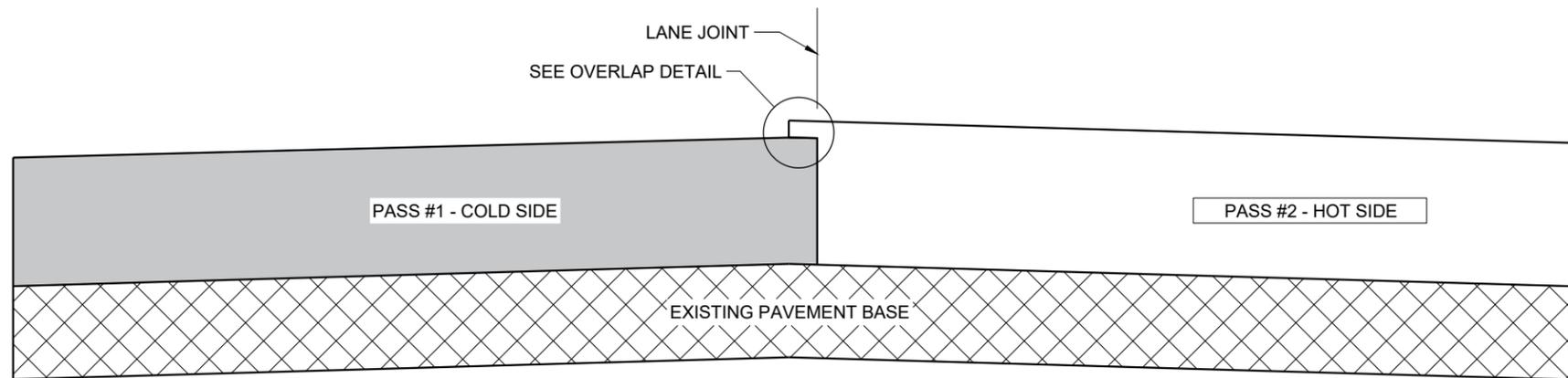
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

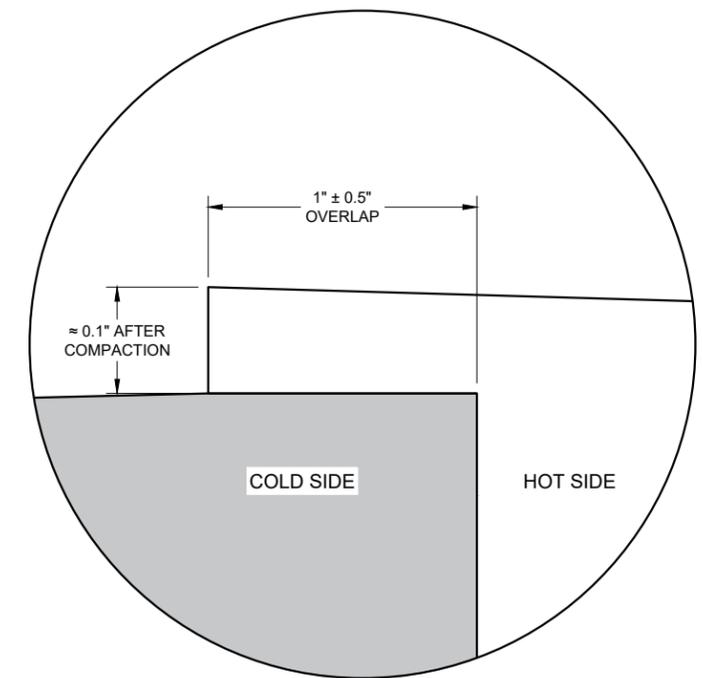
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY  $0.1"$  AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO  $2"$  FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



**OVERLAP DETAIL (TYPICAL)**

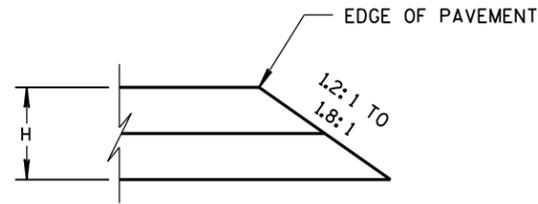
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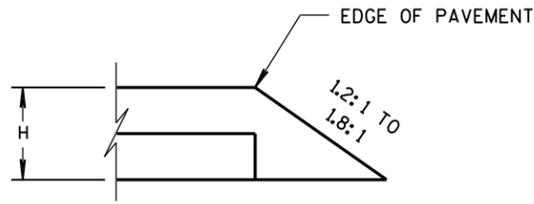
SDD 13C19 - 03

SDD 13C19 - 03

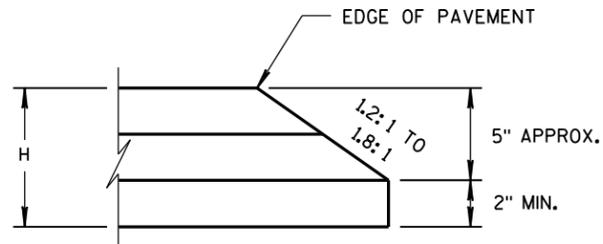
<b>HMA LONGITUDINAL JOINTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



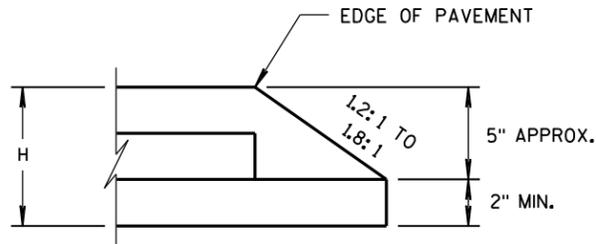
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

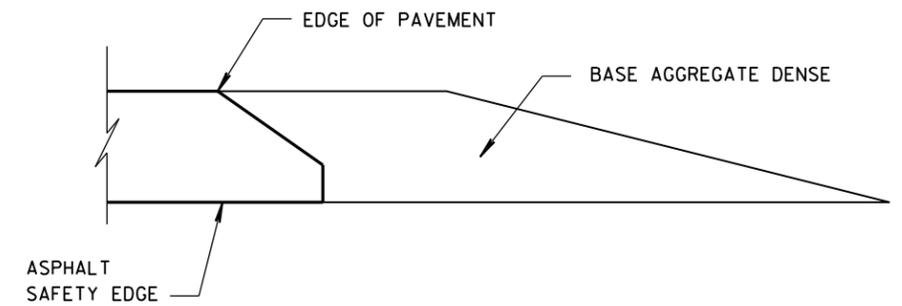


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE <sub>SM</sub>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

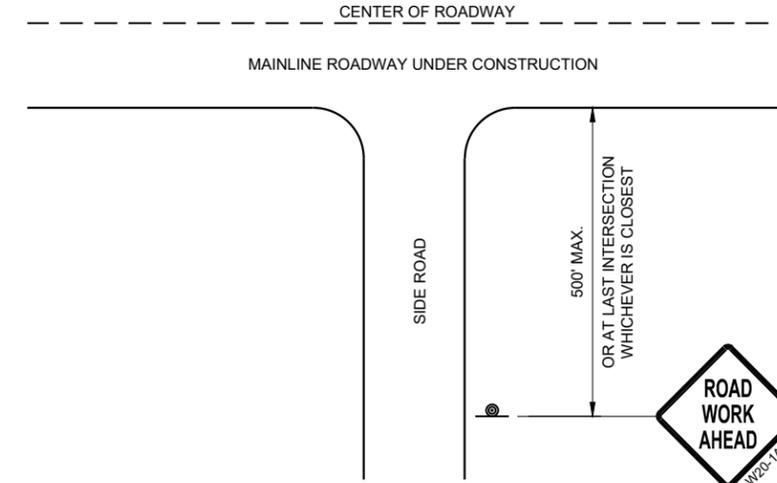
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

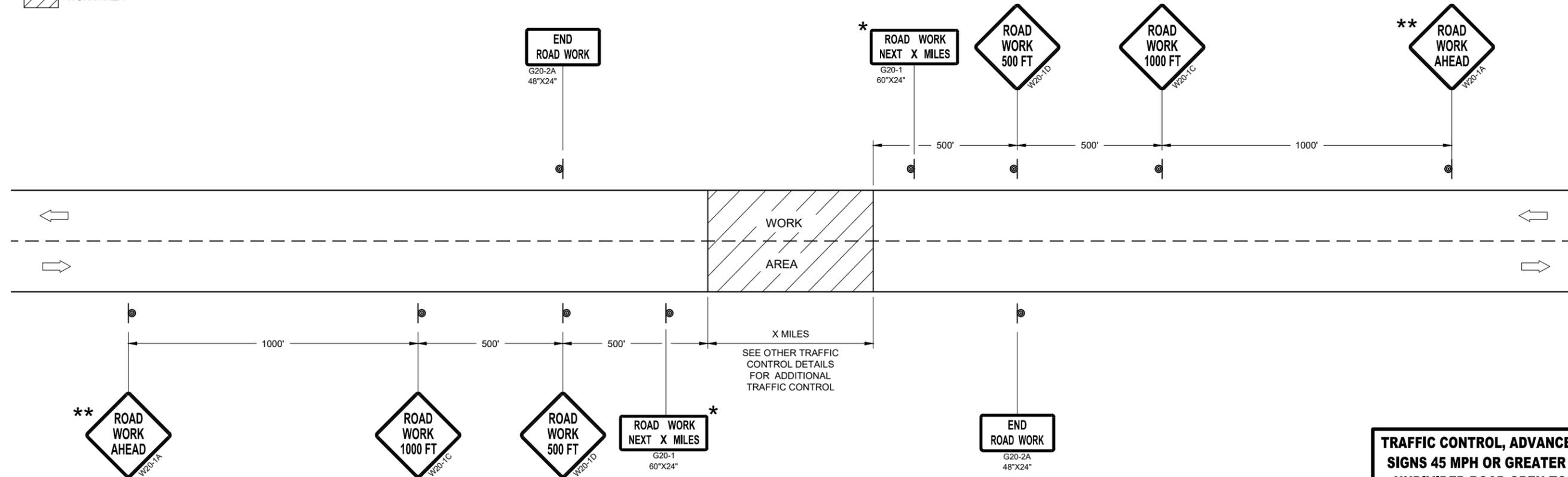
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED \_\_\_\_\_ /S/ Andrew Heidtke  
DATE July 2018 WORK ZONE ENGINEER

FHWA

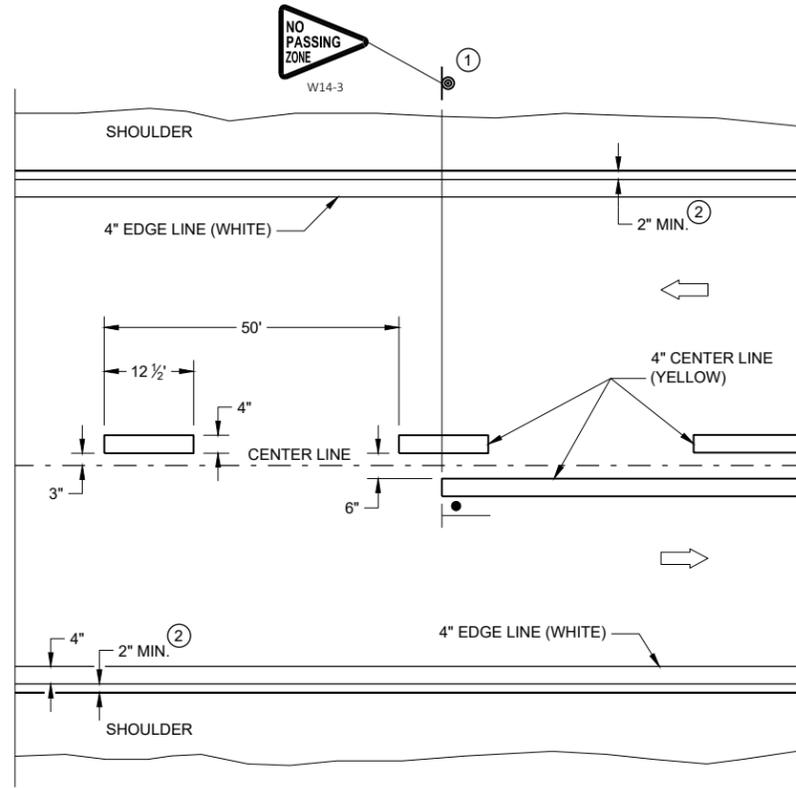
**GENERAL NOTES**

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

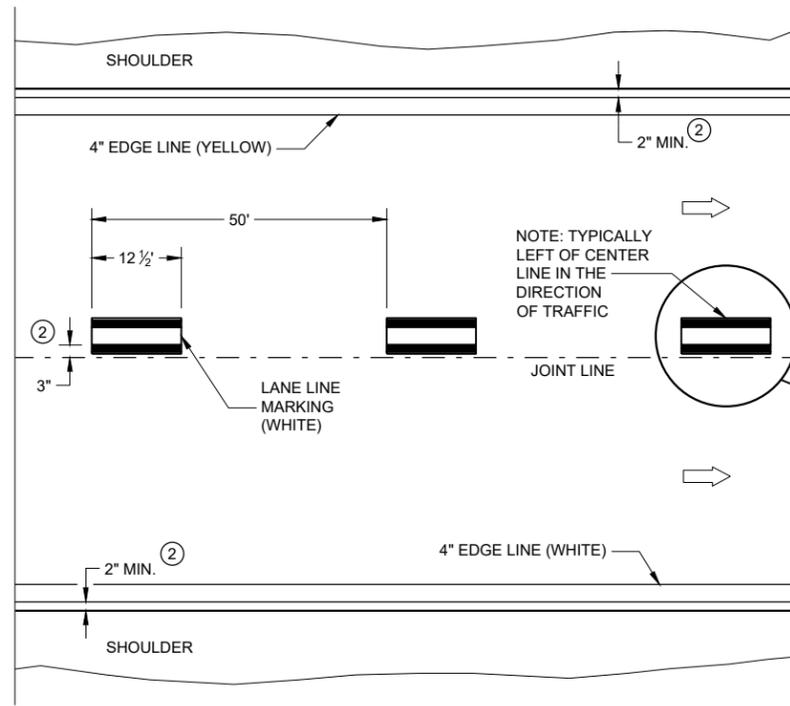
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

**LEGEND**

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

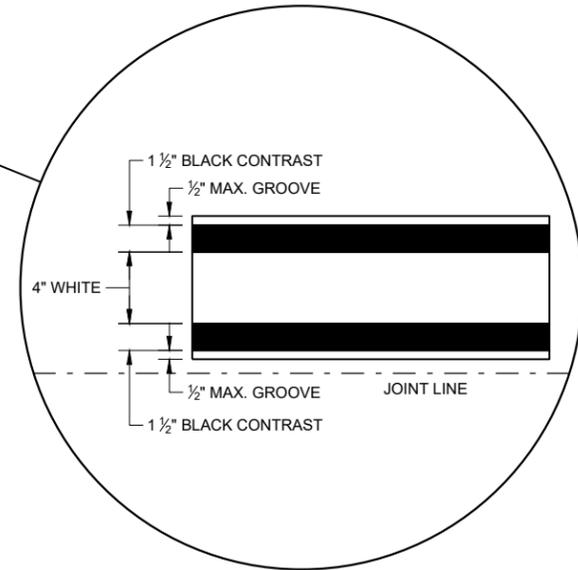


**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**



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SDD 15C08 - 21a

SDD 15C08 - 21a

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Jeannie Silver  
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

**LEGEND**

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

**FLAGGING**

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

**TEMPORARY PORTABLE RUMBLE STRIPS**

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

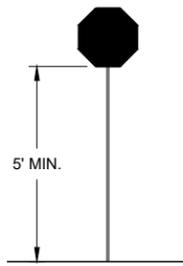
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



**STOP/SLOW PADDLE ON SUPPORT STAFF**

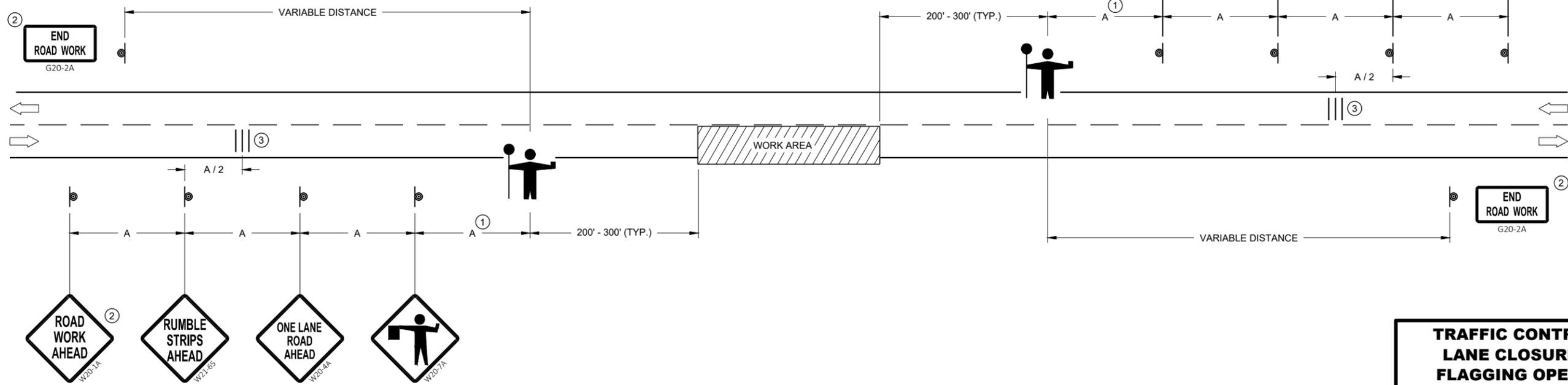
**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W03-4

USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



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SDD 15C12 - 09a

SDD 15C12 - 09a

<b>TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

**GENERAL NOTES**

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

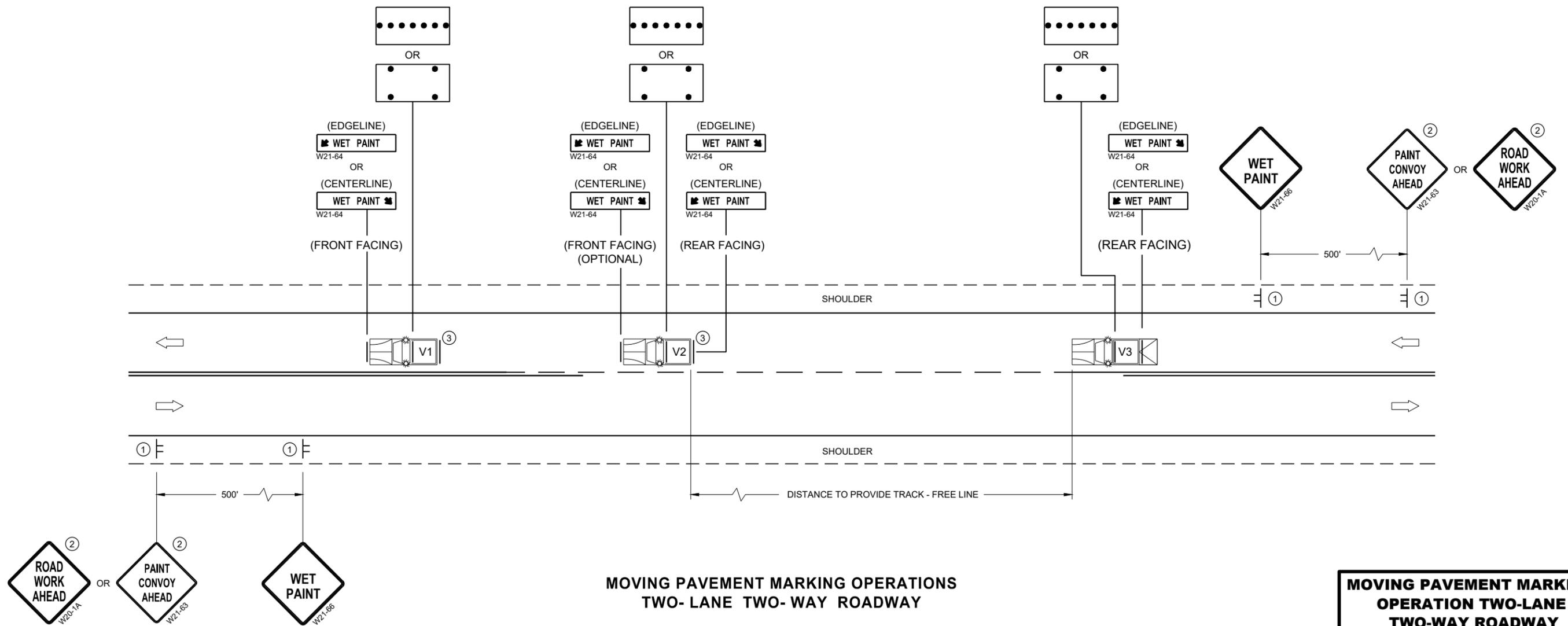
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

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**MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY**

**MOVING PAVEMENT MARKING  
OPERATION TWO-LANE  
TWO-WAY ROADWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

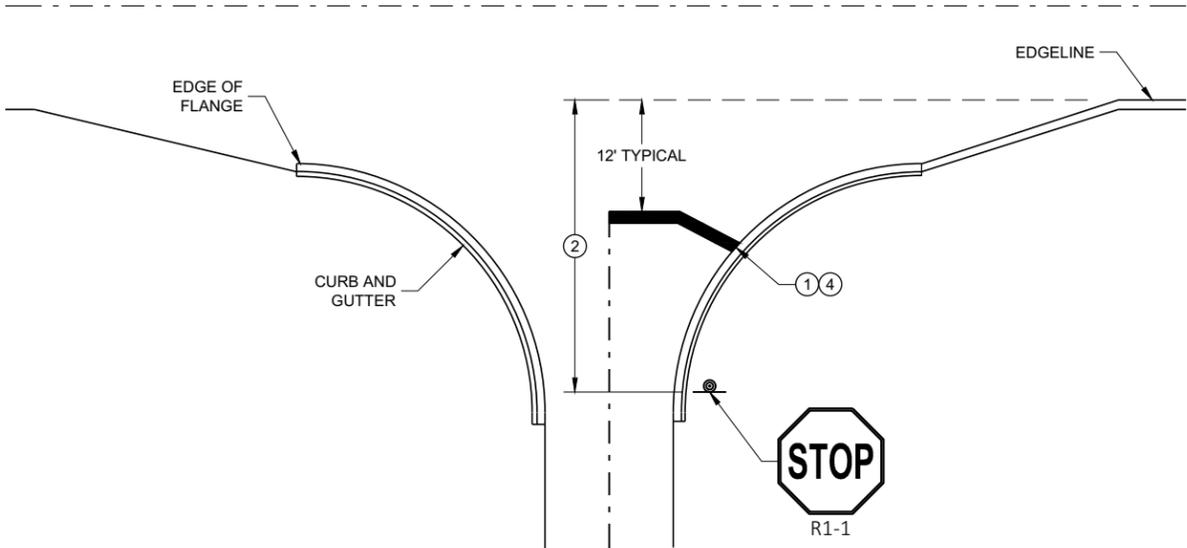
SDD 15C19 - 07a

SDD 15C19 - 07a

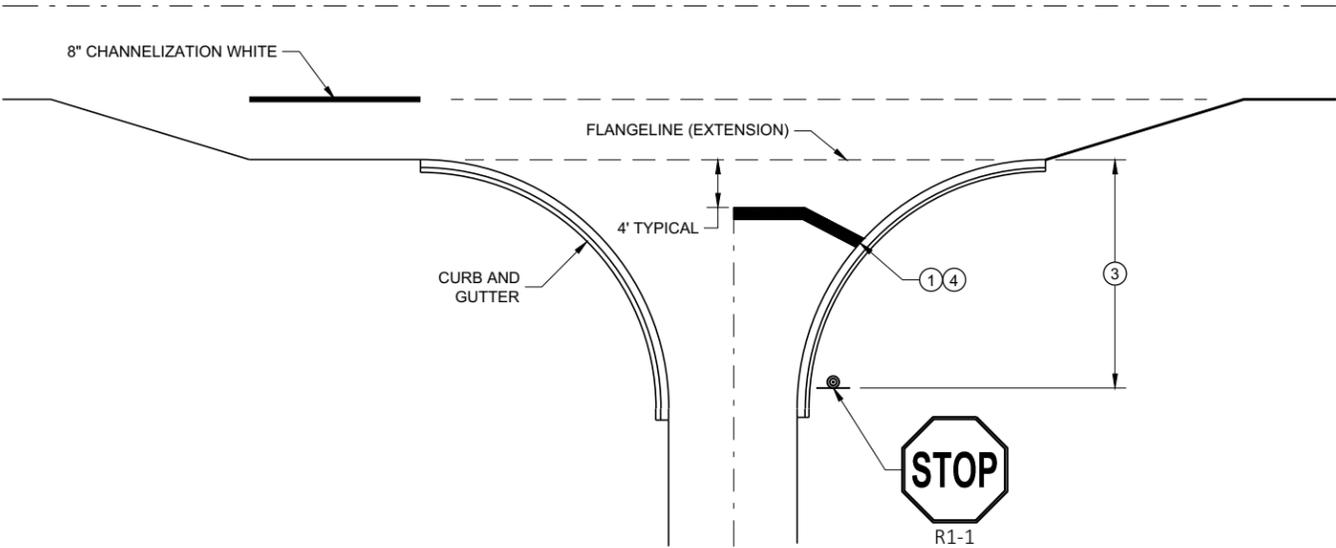
**GENERAL NOTES**

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

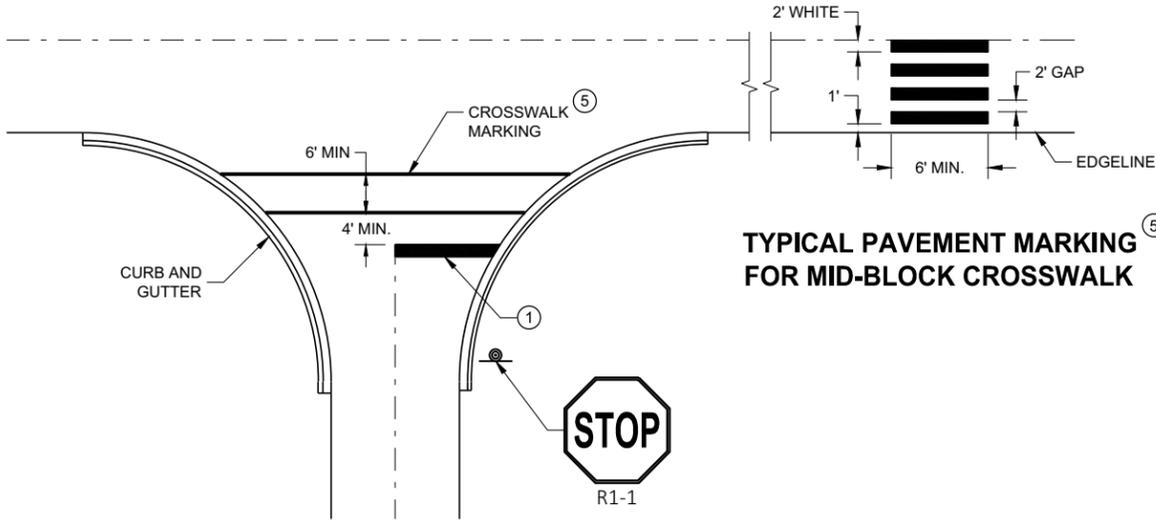
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

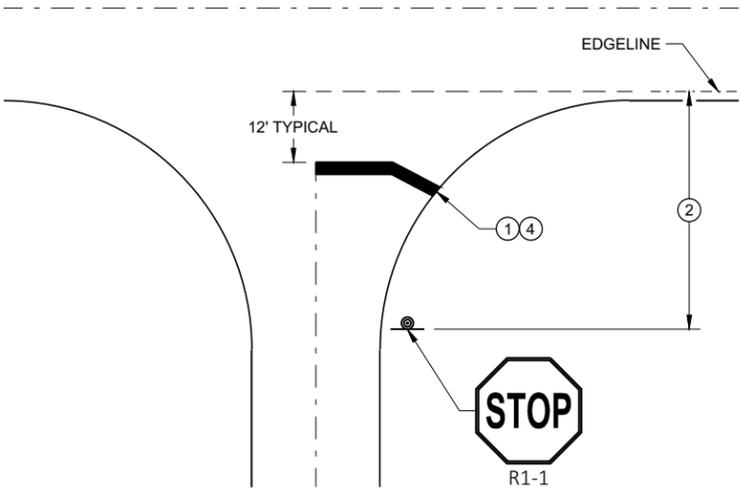


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**



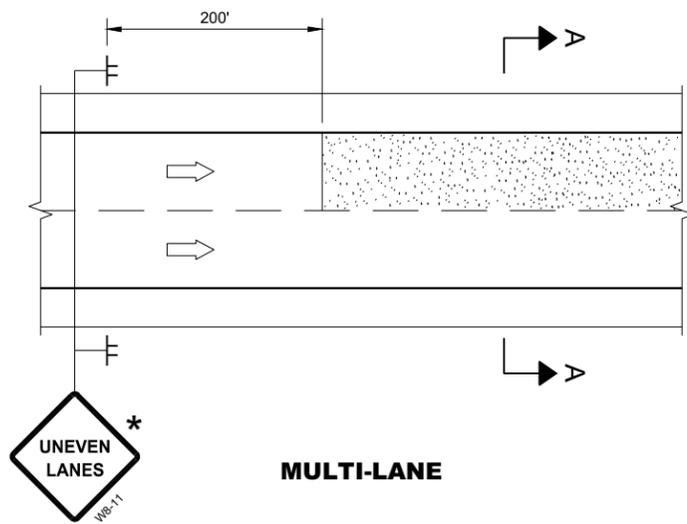
**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

**STOP LINE AND CROSSWALK PAVEMENT MARKING**

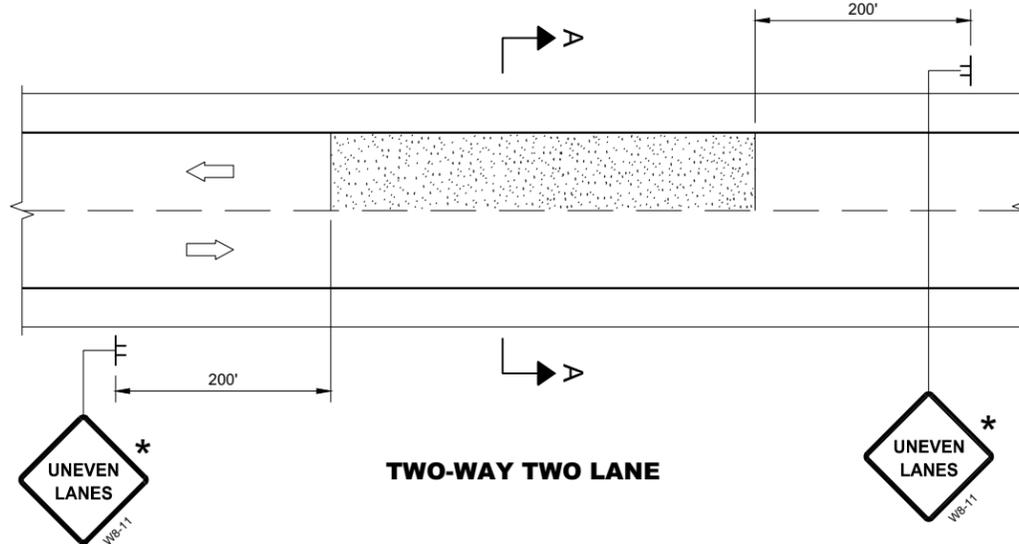
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

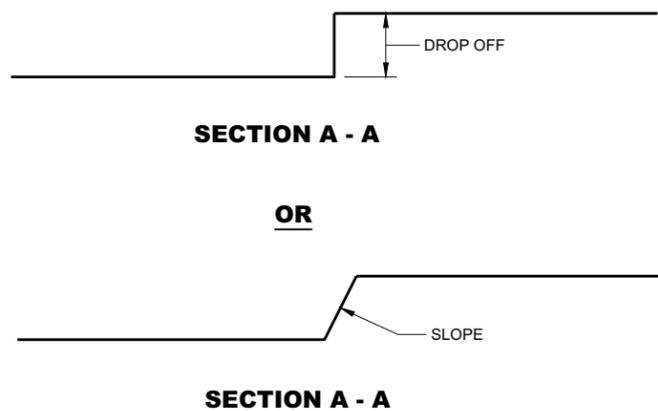
FHWA



**MULTI-LANE**



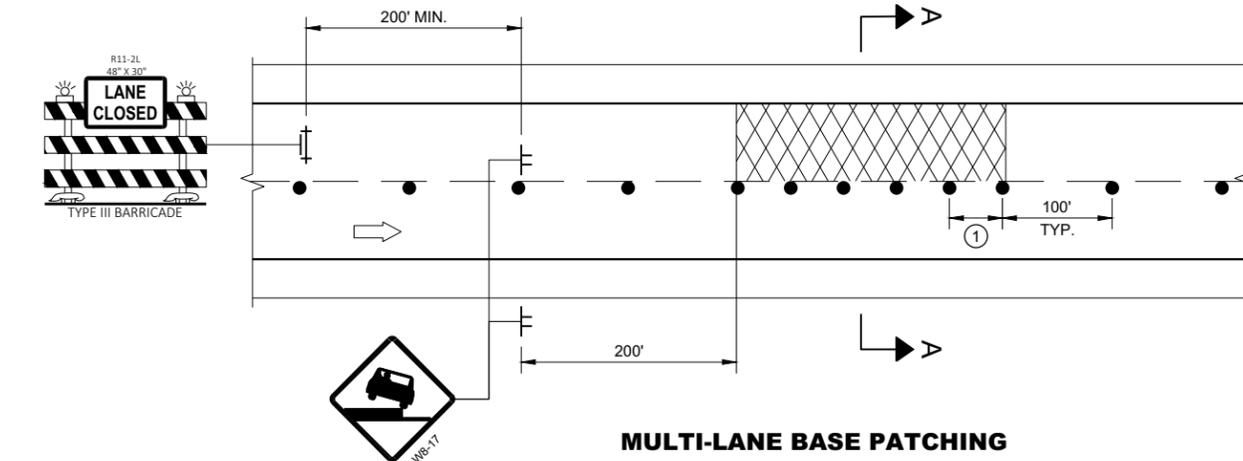
**TWO-WAY TWO LANE**



**SECTION A - A**

OR

**SECTION A - A**



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**

**GENERAL NOTES**

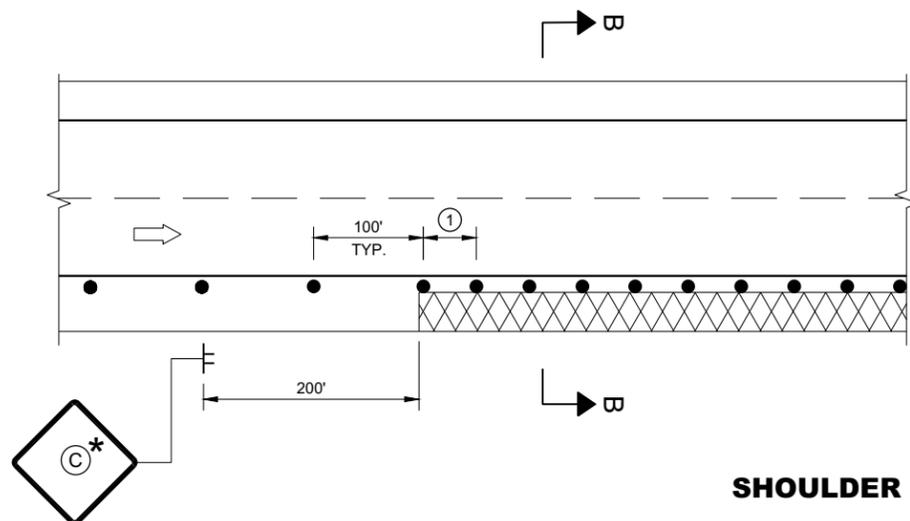
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- \* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

**LEGEND**

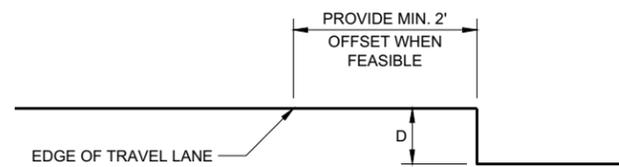
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

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**SHOULDER DROP-OFFS**



**SECTION B - B**

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,  
DROP-OFF SIGNING**

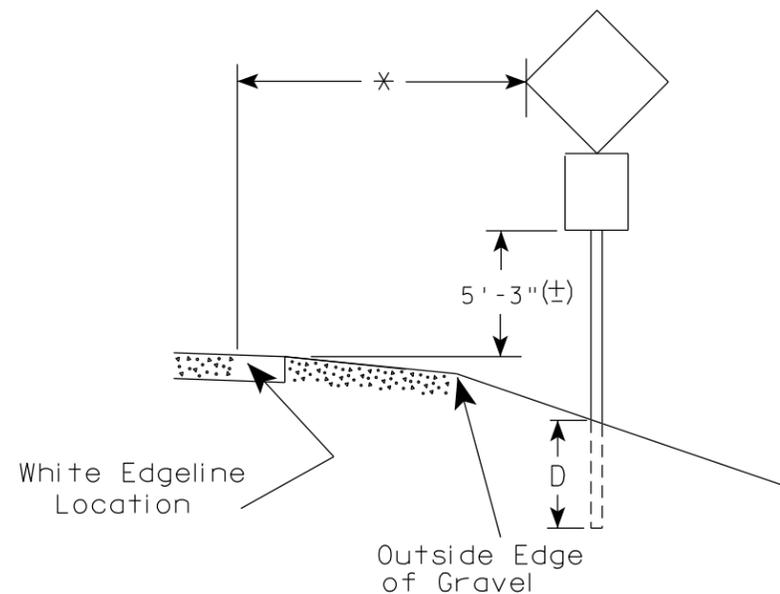
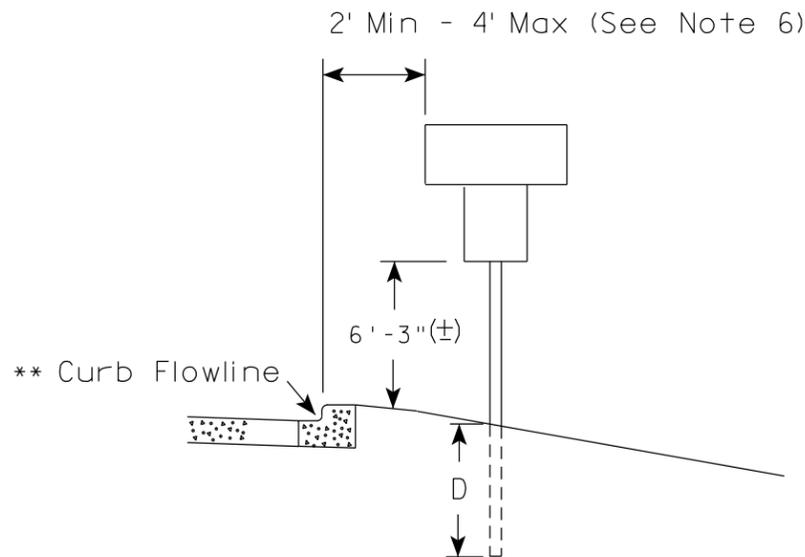
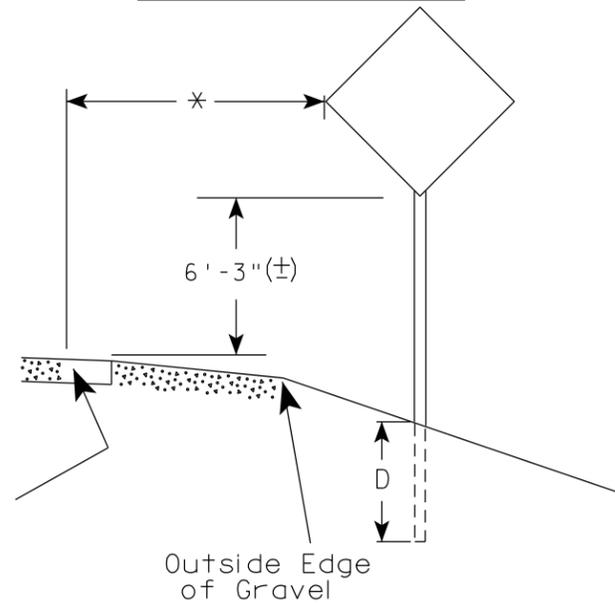
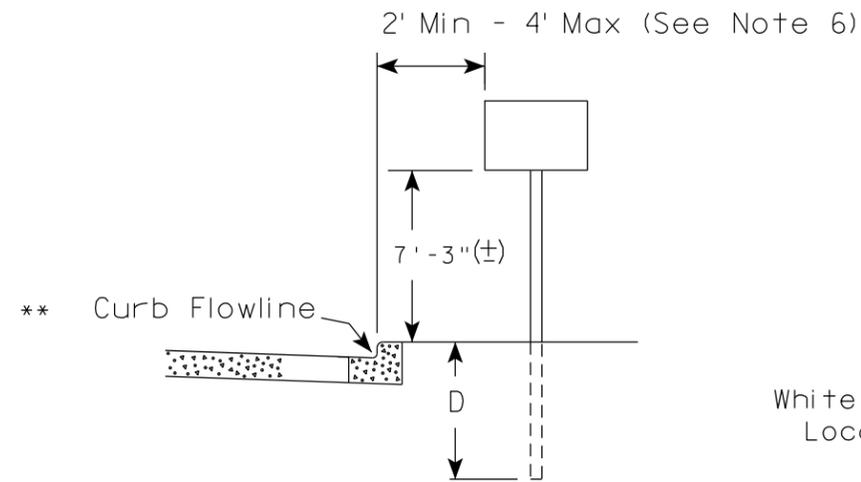
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER

FHWA

URBAN AREA

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

- GENERAL NOTES**
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
  2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
  3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
  4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
  5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
  6. The (±) tolerance for mounting height is 3 inches.
  7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

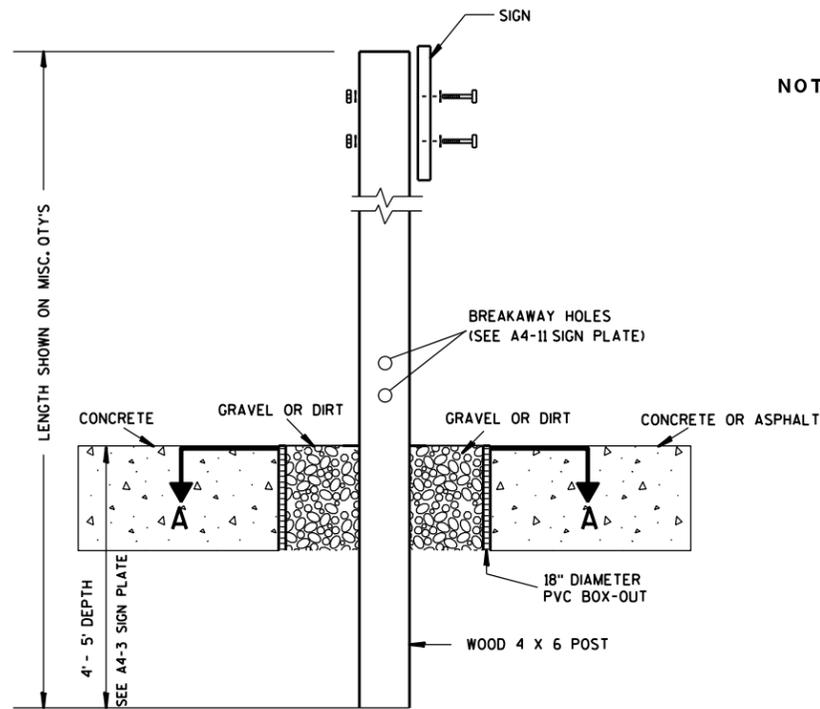
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

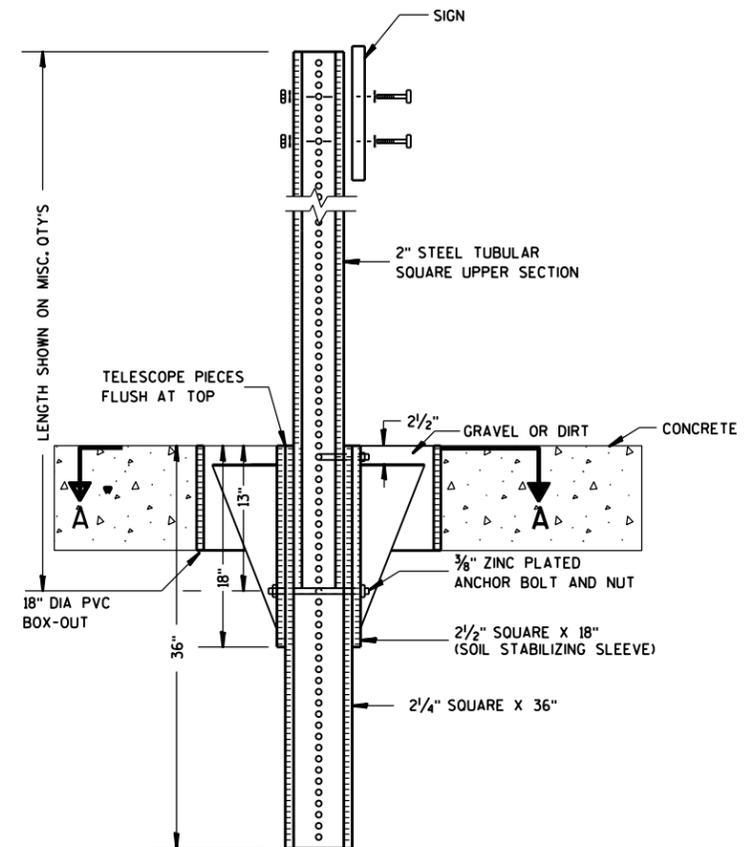
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

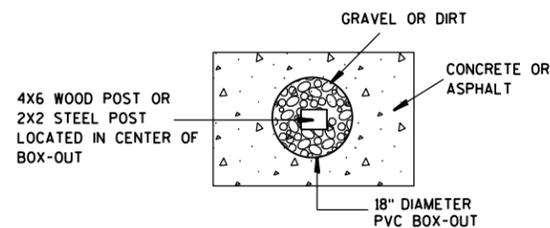
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

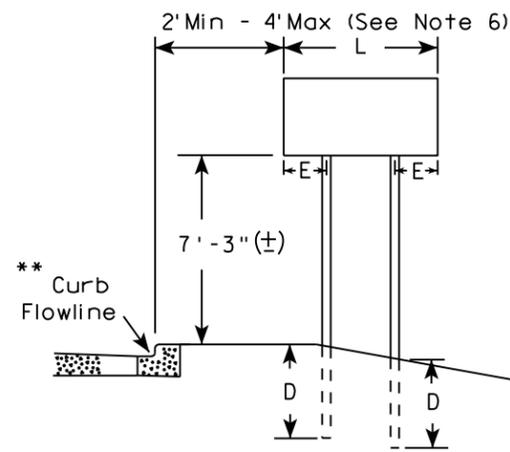
**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
DATE <u>1/27/14</u>	PLATE NO. <u>A4-3B.1</u>

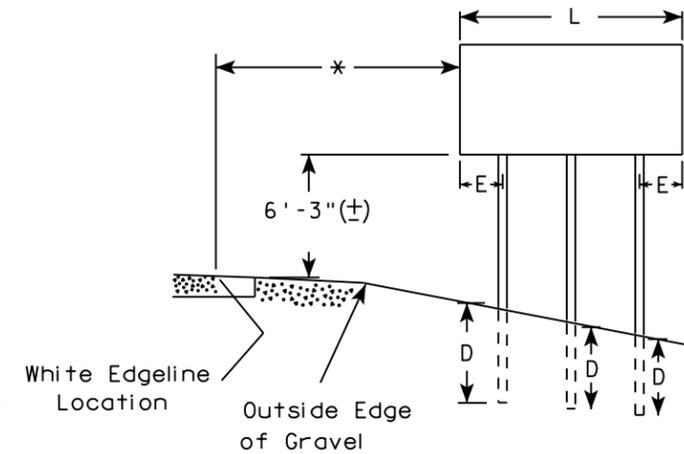
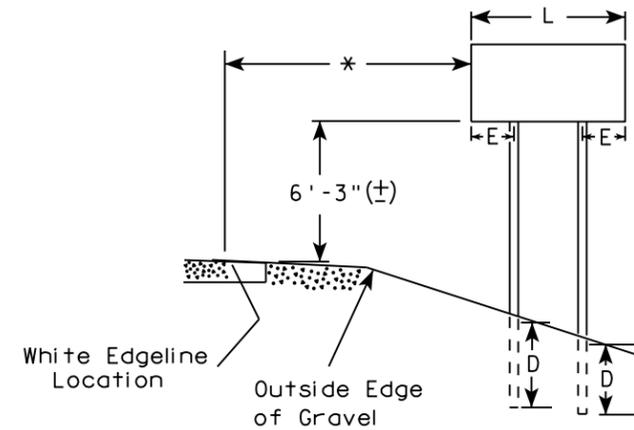
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

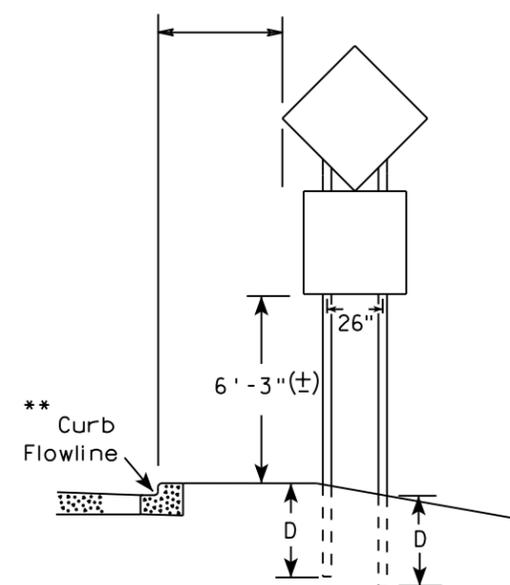
URBAN AREA



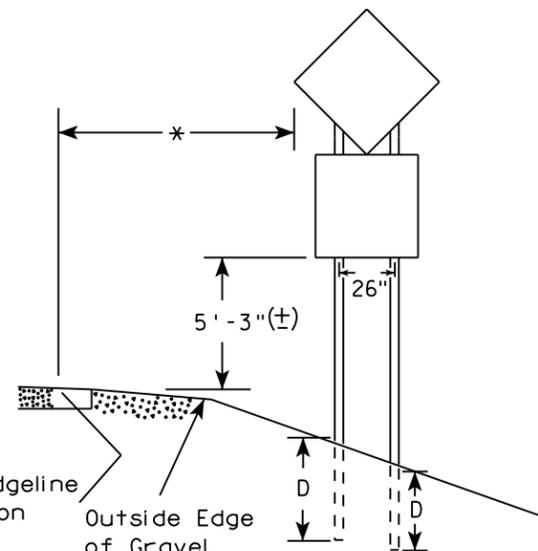
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

\*\*\*

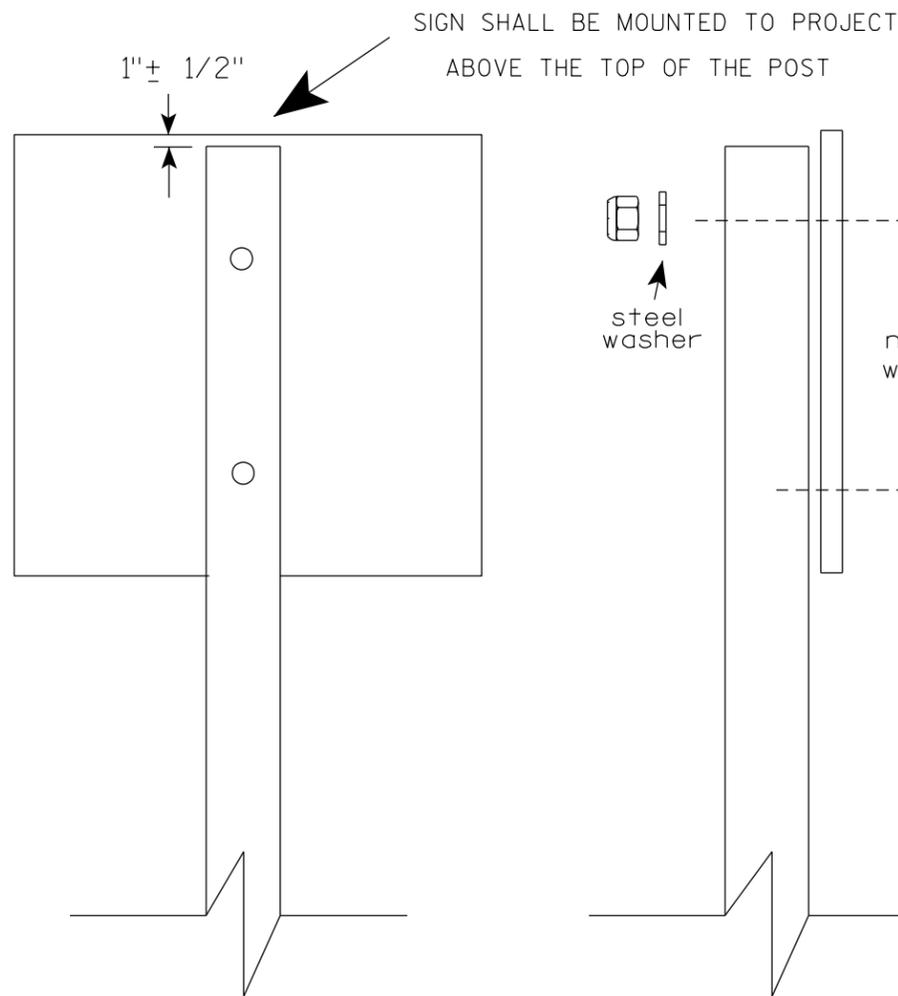
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 8/21/17 PLATE NO. A4-4.15



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)  
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS  
TO POSTS

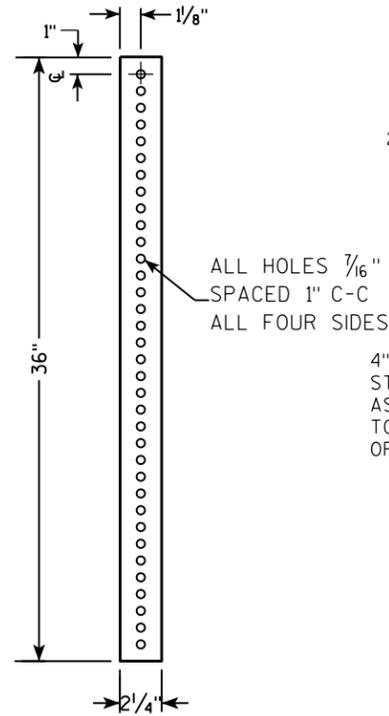
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

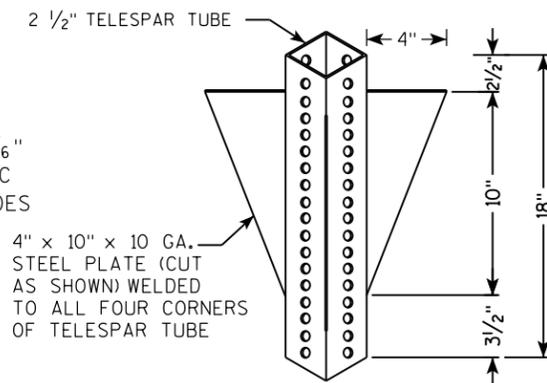
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

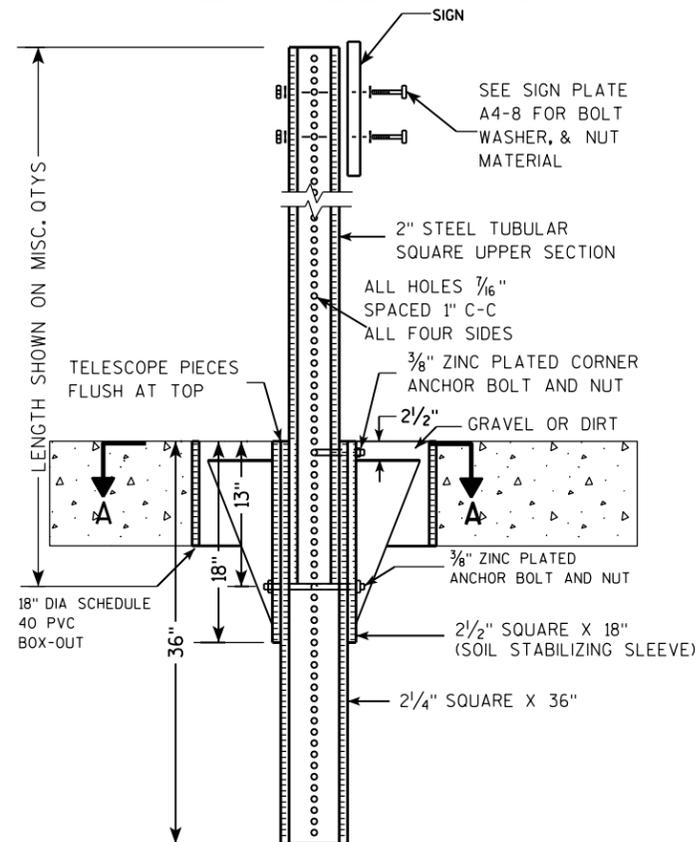
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



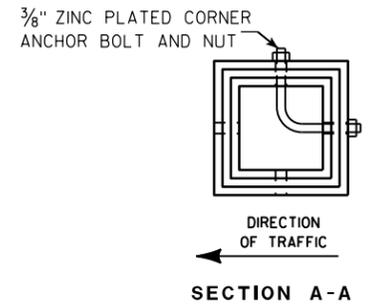
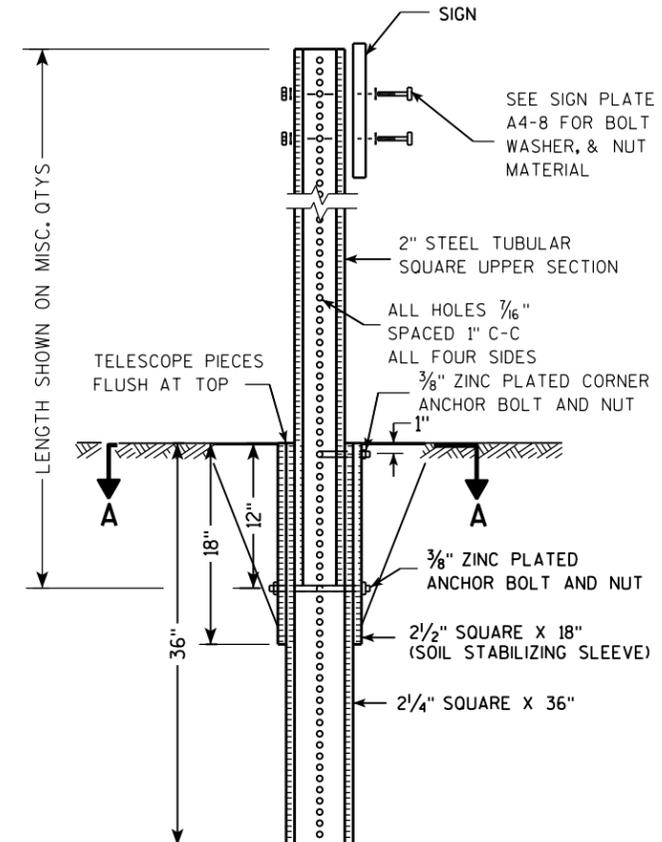
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

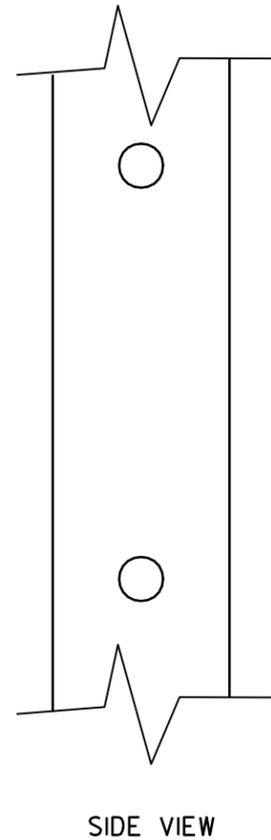
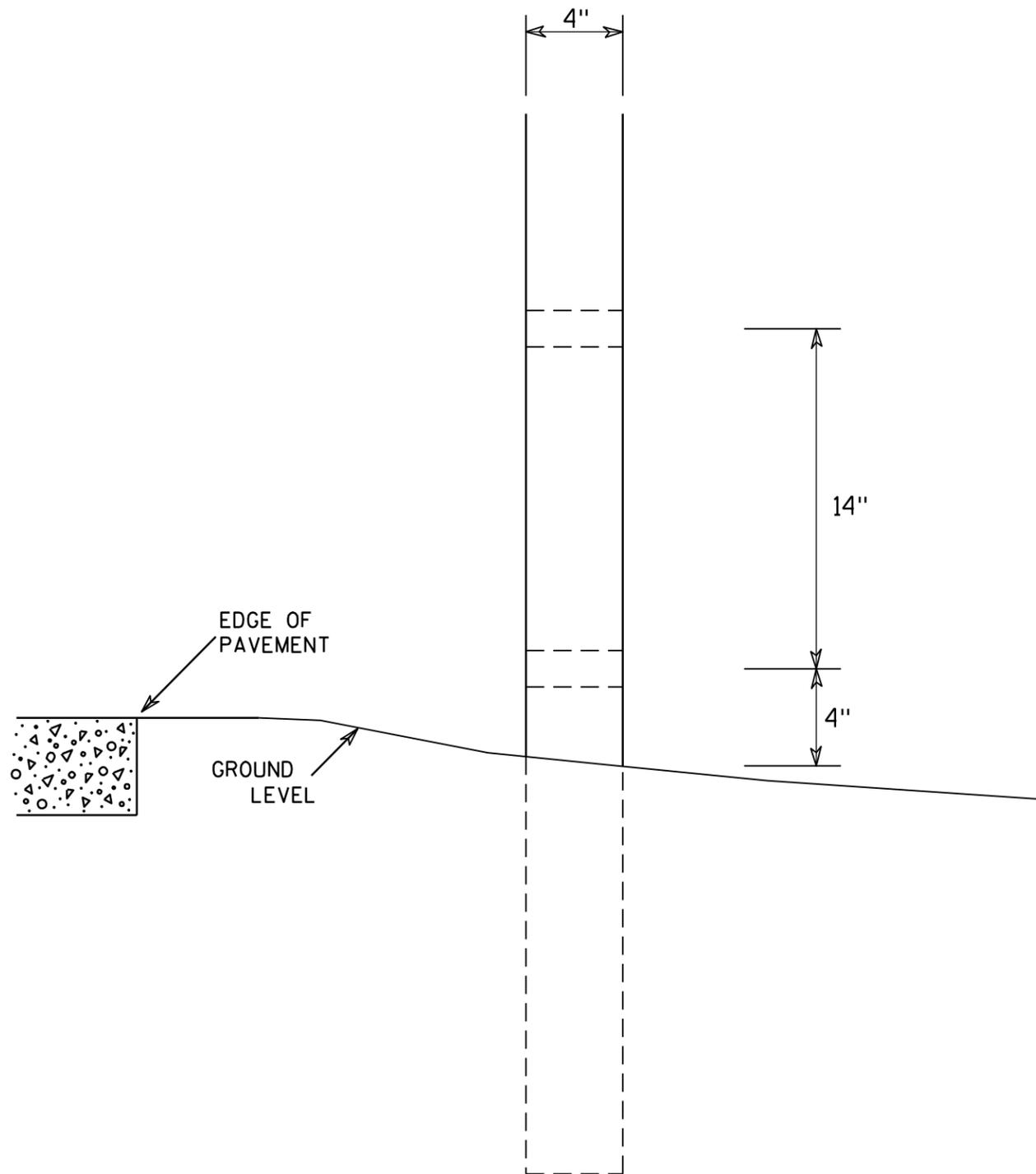
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

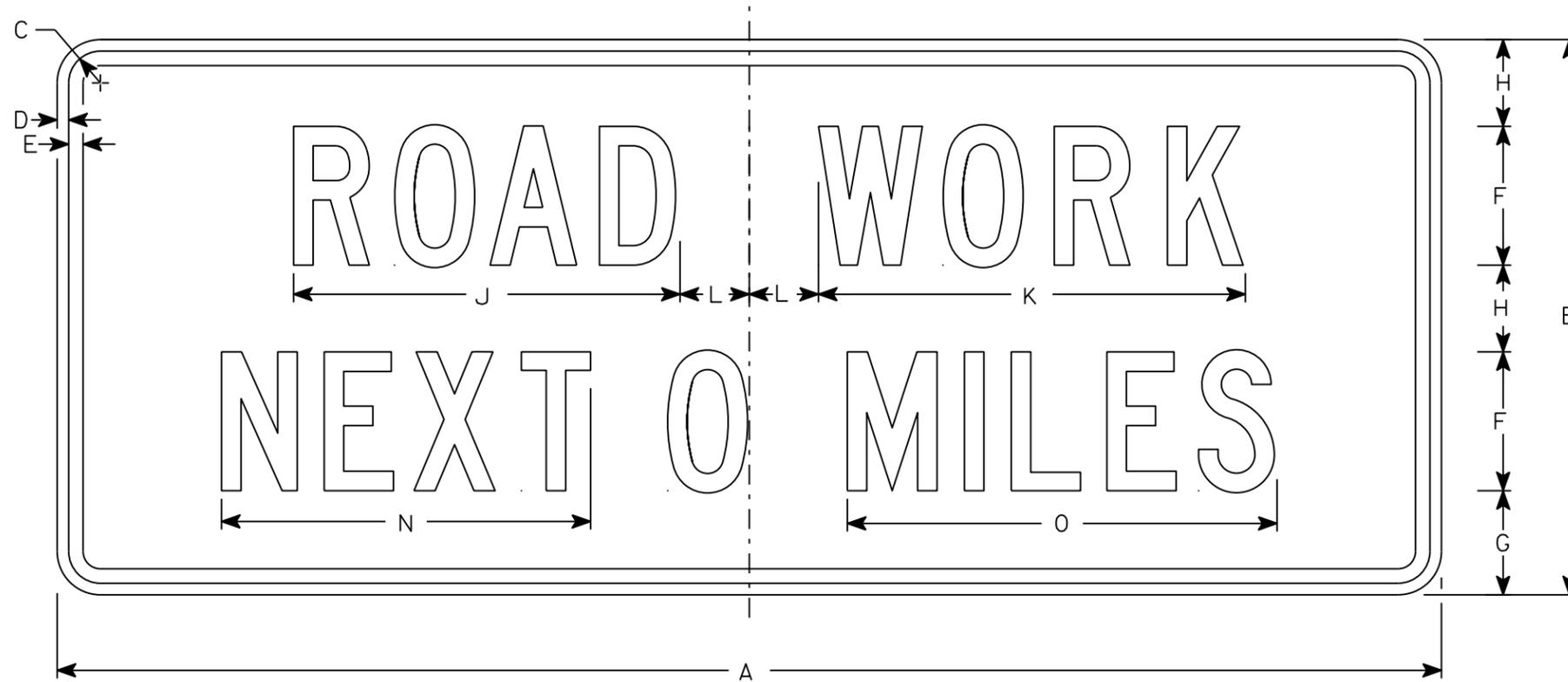
7

7

<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-1

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4		16 3/4	18 1/2	3		16	18 5/8												10
5																											

STANDARD SIGN  
G20-1

WISCONSIN DEPT OF TRANSPORTATION

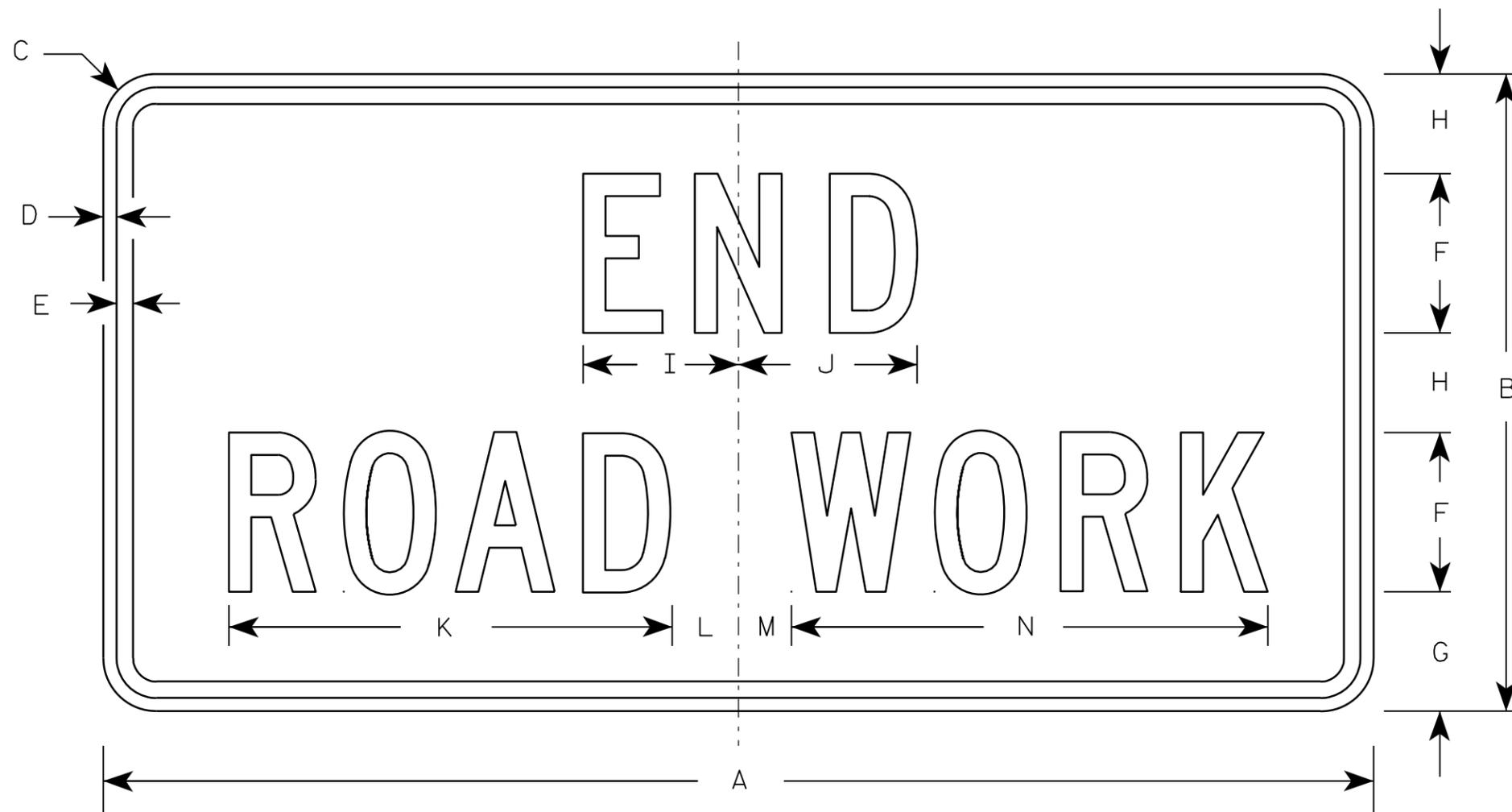
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

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Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

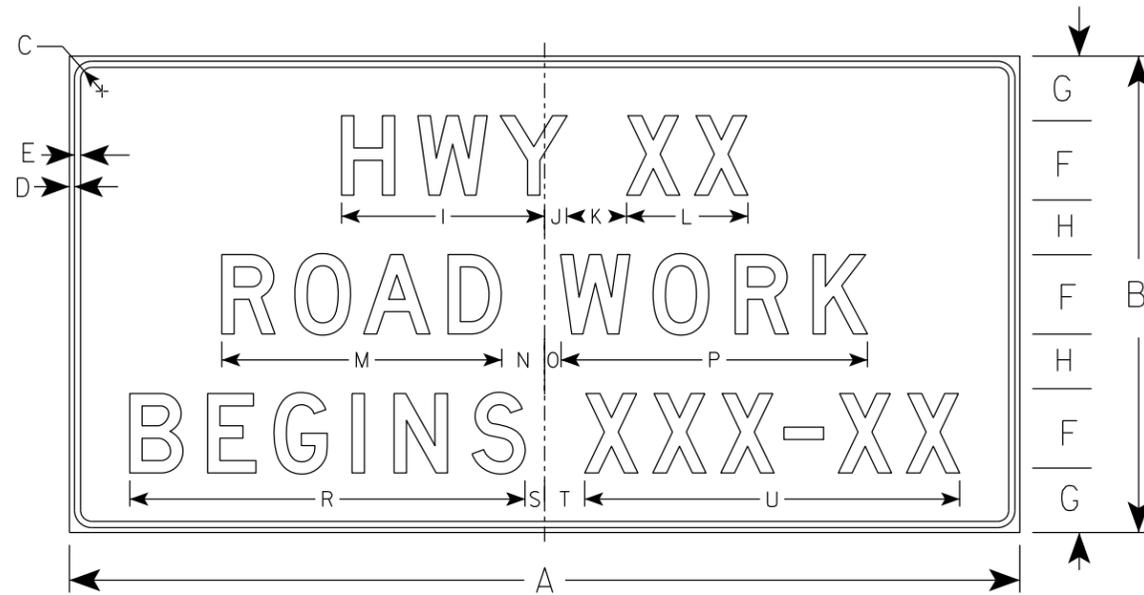
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	<b>E</b>
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NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN  
G20-57

WISCONSIN DEPT OF TRANSPORTATION

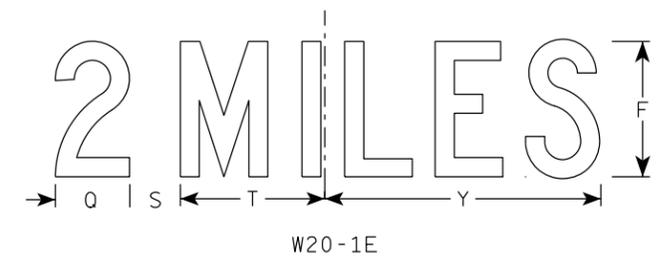
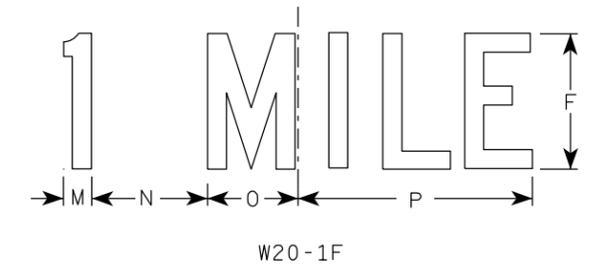
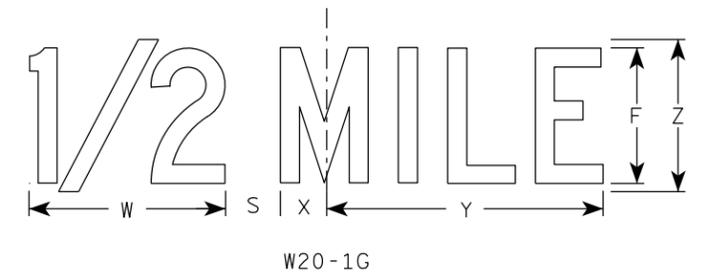
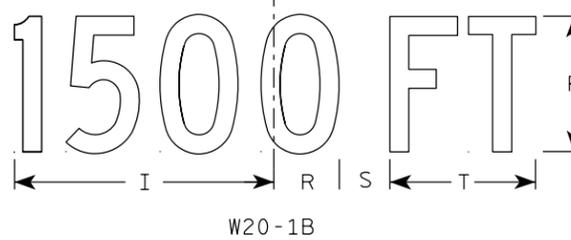
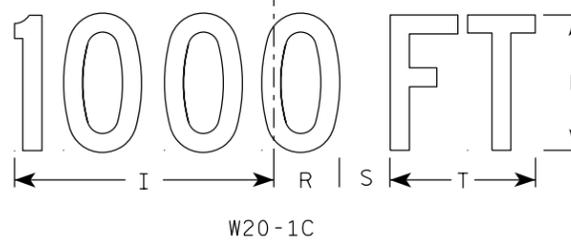
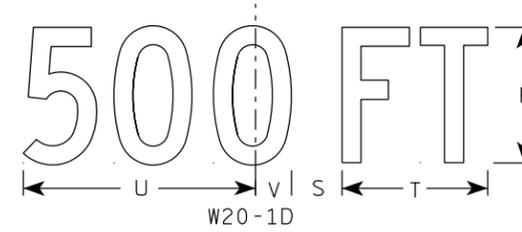
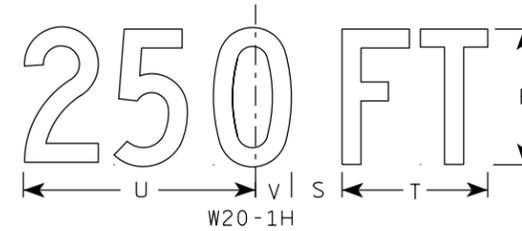
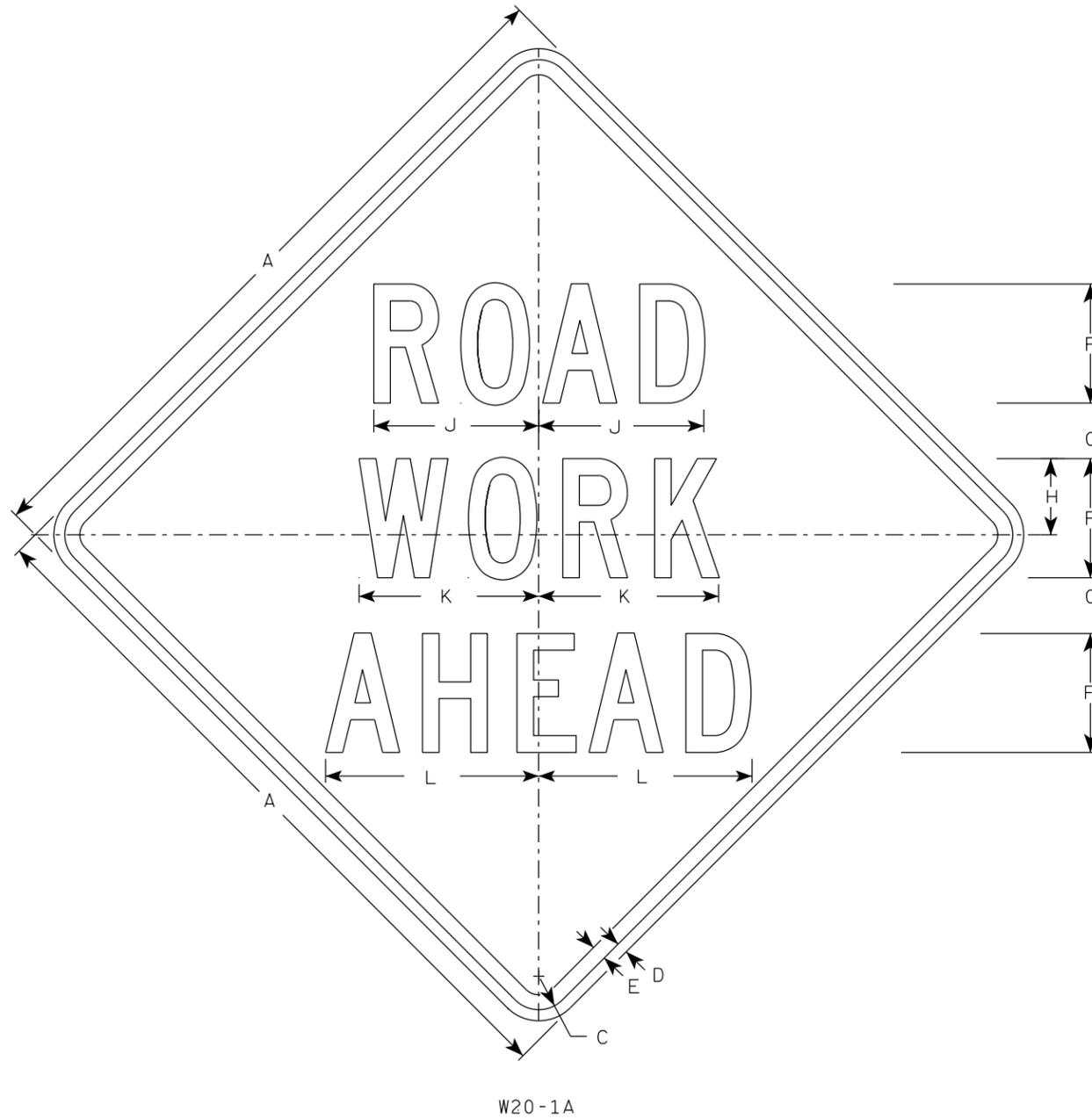
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

**NOTES**

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

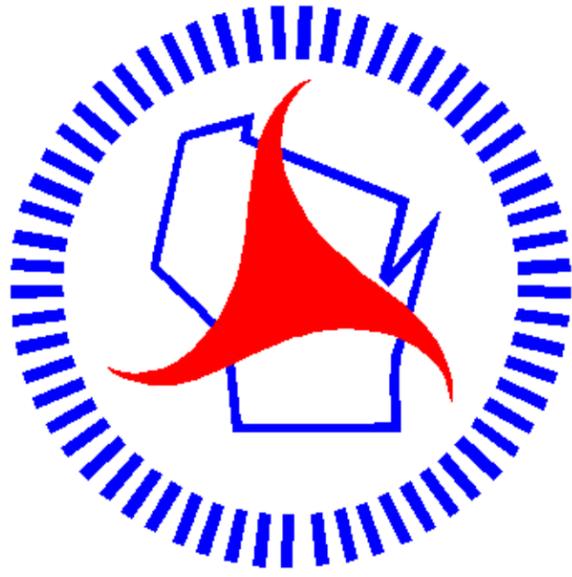
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



## ***Wisconsin Department of Transportation***

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